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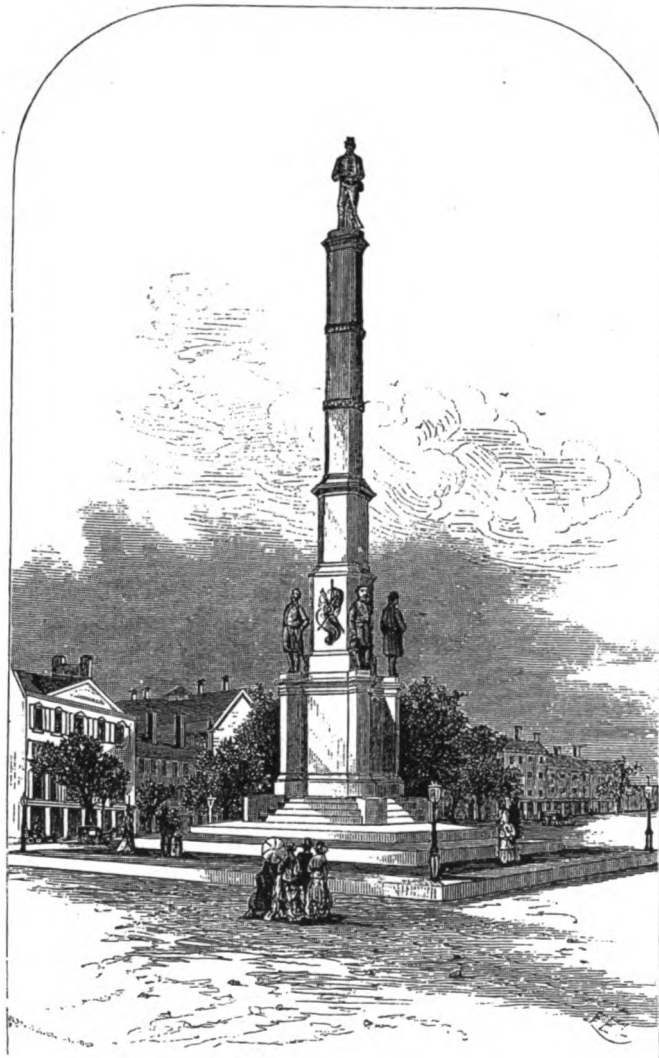
**Georgia: A Guide to its Cities, Towns, Scenery,
and Resources**

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CONFEDERATE SOLDIERS' MONUMENT, BROAD STREET, AUGUSTA.

GEORGIA:
A GUIDE TO
ITS CITIES, TOWNS, SCENERY, AND
RESOURCES.

WITH TABLES CONTAINING VALUABLE INFORMATION FOR PERSONS DESIRING TO SETTLE OR TO MAKE INVESTMENTS WITHIN THE LIMITS OF THE STATE.

BY

J. T. DERRY,
PROFESSOR OF ANCIENT LANGUAGES IN ACADEMY OF RICHMOND COUNTY, AND AUTHOR OF "A HISTORY OF THE UNITED STATES."

WITH ILLUSTRATIONS.



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State Historical Society
OF WISCONSIN
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INTRODUCTION.

GEORGIA, one of the original thirteen States of the American Union, extends in latitude from $30^{\circ} 21'$ to 35° north, and in longitude from $80^{\circ} 48'$ to $85^{\circ} 40'$ west (reckoning from Greenwich). Its extreme length from north to south is three hundred and twenty miles, and its greatest breadth from east to west is two hundred and fifty-four miles. Its area is fifty-eight thousand square miles, equal in size to England and Wales combined. The surface is low and level on the coast, hilly in the centre, and mountainous in the north and northwest. Owing to the diversity of climate and soil, the productions are wonderful in variety. The famous Sea Island cotton is raised on the islands along the coast, and cotton is also the great staple of the central and southern portions of the State. The rice-fields along the coast give a bountiful yield, and in the south a considerable amount of sugar is made. In all sections of Georgia corn is cultivated with the greatest success, and through the central and more northern sections all the grains common to the more Northern States of the Union are produced. The fruits embrace not only those usually found in the temperate zone, but also many of those that belong to the tropics. No country in the world can offer greater inducements to the industrious immigrant seeking a pleasant home where he may enjoy the privileges of churches, excellent schools, and good society. All these advantages

may be enjoyed in all sections of the State, and are not confined, as some writers of limited knowledge would lead their readers to suppose, to the cities and the large towns.

Agriculture has always been the chief employment of the citizens of Georgia, and her magnificent railway system affords ready access to the markets for the produce of the planters. For many years past great attention has been paid to manufactures, especially of coarse cotton fabrics. It is the custom of many writers to represent the people of the South as just beginning to wake up to the necessity of diversified industry, while the truth is that long before the War of Secession the people of the South were engaging in manufacturing enterprises and in the construction of extensive lines of railway. In these things Georgia was, and is yet, the foremost of the Southern States, and in many of her towns and villages one may hear the busy hum of spindles and mark the evidences of progressive industry. Manufactures are encouraged by an act of the Legislature exempting all enterprises of this sort from taxation for a period of ten years. The lands in most parts of the State are good, and even the so-called "worn-out lands" are, by proper cultivation, made to produce abundant crops. The soil is particularly rich in the valleys, in the lowlands, on the coast, and on the adjacent islands. In the eastern part of the State, and a little below the central portion, are extensive forests, from which the best of lumber is obtained. It is estimated that one-fifth of the lumber trade of the Union is carried on through Savannah and the other ports along the coast of Georgia. The sea-coast is about one hundred miles in length. The ports are Savannah, Darien, Brunswick, and St. Mary's. The three latter are small towns, and are chiefly engaged in

the lumber trade. Savannah, though a city of only about thirty thousand inhabitants, is, in the value of its exports, the third city of the Union. Augusta, on the eastern side of the State, and Columbus, on the western side, are great manufacturing centres. The manufactures of Georgia are destined at no distant day to add greatly to the prosperity and wealth of the State. Probably no State possesses a greater number of splendid sites for mills and factories, and the policy of the State government is, as has already been mentioned, such as to foster in every way enterprises of this sort. No State of the Union is blessed with a greater variety of soil, climate, and productions. Dr. George Little, the State Geologist, in his report for 1875, says: "Every fruit and cereal and textile fibre useful to man can be cultivated in one portion or another of the State. Every variety of climate is afforded, as illustrated in my own experience during the present month, when leaving one party on the southern border sleeping in the open air on the islands of the Okefinokee, with oranges and bananas hanging in the gardens on its borders, I joined in the same week another party on the Cohutta mountains covered with snow; while in passing through Atlanta, balmy breezes were blowing as if it were spring-time."

Georgia is rich in minerals, metals, and building-stones.

The value of improved lands in Georgia varies from fifty-one cents to fourteen dollars and forty-two cents per acre, while the value of wild lands varies from eleven cents to one dollar and seventeen cents per acre.

GEORGIA:

ITS CITIES, TOWNS, SCENERY, AND RESOURCES.

CHAPTER I.

Historical Sketch of Georgia.

A CHARTER for the establishment of the colony of Georgia was obtained from George II., King of England, in June, 1732. At first it embraced a territory between the Savannah and the Altamaha rivers, but its limits were afterwards extended to the Mississippi River, so that within its bounds were included not only the present State of Georgia, but also most of what now constitutes the States of Alabama and Mississippi.

The object of the founders of Georgia was to establish a barrier against the hostile encroachments of the Spaniards on the Province of South Carolina, and at the same time to provide a home for the poor of Great Britain, and also to furnish a place of refuge for the Salzburgers, and other persecuted sects on the Continent of Europe.

James Edward Oglethorpe was selected by the trustees to take charge of the affairs of the new colony, and in November, 1732, he set sail from England with one hundred and sixteen emigrants. In January, 1733, after a voyage of nearly two months, they arrived in the harbor of Charleston, where they were received with the greatest

generosity by the Carolinians and their governor, Robert Johnson. The Carolinians furnished them with provisions and stock, and also with vessels to convey additional supplies to the Savannah River. They also sent along a company of soldiers to protect them against the Indians until they could build houses and fortifications.

After leaving Charleston the new settlers went to Beaufort, in South Carolina. Here Oglethorpe left the party and ascended the Savannah until he came to Yamacraw Bluff, which spot he selected for his settlement. On the 1st of February the colonists arrived, and the first house was commenced on the 9th. Oglethorpe called the new town Savannah, from the name of the river on whose banks it was situated. Tomochichi, chief of the Yamacraws, a tribe of Indians who lived near by, immediately sought an alliance with Oglethorpe, who made a treaty with him. Oglethorpe also made treaties with the Creeks, the Muscogees, and even with the Cherokees of the mountains and the Choctaws on the borders of the Gulf of Mexico.

In March, 1734, the colony was strengthened by the arrival of seventy-eight Salzburgers from Germany, who had been driven from their homes by the most terrible persecutions (for in that day religious toleration was almost unknown). They settled in a portion of Georgia now known as Effingham County, at a place which they called Ebenezer, or the "Stone of Help," in gratitude to God for their final deliverance from all their enemies.

Oglethorpe also established settlements in other portions of Georgia. A company of Scotch Highlanders was located at Darien, a company of immigrants was settled at Frederica, on St. Simon's Island, and trading-posts were established at Augusta. In February, 1736, two hundred and twenty-seven immigrants came over to

Georgia, among whom were the celebrated founders of Methodism, John and Charles Wesley, who came to preach the gospel to the Indians, and also to the settlers. In 1738 there came to Georgia another eminent minister, afterwards celebrated in the great Methodist movement, the Rev. George Whitefield, who resided in the colony several years, and during his stay founded the Orphan House at Bethesda, a few miles from Savannah.

The Spaniards, who had established settlements in Florida in 1512, nearly one hundred years before the first permanent English settlement at Jamestown, in Virginia, claimed the territory of Georgia as their own, and regarded its colonization by the English as an intrusion upon their rights. They, therefore, resolved to expel the English from Georgia. In 1737, Oglethorpe, anticipating a war with Spain, went to England, where he raised a regiment of six hundred men for the defence of the colony. He was now appointed commander-in-chief of all the militia forces of Georgia and South Carolina. On the breaking out of the anticipated war in 1739, Oglethorpe invaded Florida, at that time a Spanish province, at the head of two thousand men, consisting of his own regiment and the rest Carolinians and friendly Indians. The expedition, however, was a failure, and in 1742 the Spaniards invaded Georgia with a land and naval force of three thousand men. In this emergency Oglethorpe was obliged to rely upon his own resources, for the Carolinians, provoked at his former failure, would give him no assistance. Accordingly he prepared to make the best possible defence with the forces at his command, numbering barely eight hundred men. No general engagement occurred, however, though a force of three hundred Spaniards was attacked on St. Simon's Island by a far inferior force of English troops and routed, with a

loss of two-thirds of their number. This affair is known as the battle of the Bloody Marsh. The Spaniards, being discouraged by this affair and deceived by the movements and stratagems of Oglethorpe, abandoned the invasion as hopeless and returned to Florida. In 1743 General Oglethorpe returned to England, and a civil government was substituted for the military government which had previously prevailed.

In 1747 the laws against the introduction of negroes into Georgia were repealed. In the latter part of the same year the colony was threatened with great danger. A man named Bosomworth, who had been a chaplain in Oglethorpe's regiment, set up a claim in behalf of his wife Mary (who was an Indian squaw, and claimed to be queen of the Creeks) to all of the islands and lands reserved by the Indians in their first treaty with Oglethorpe. In support of this claim Bosomworth and Mary marched at the head of a large Indian force upon Savannah, and threatened to exterminate the colonists unless their demands were complied with. The firmness of the authorities, however, saved the colony, and the Indians, after being deprived of their leaders, were forced into submission. In 1752 the trustees, to whom the charter for the establishment of the colony of Georgia had been granted, surrendered their rights under it to the crown, and in 1754 Captain John Reynolds, of the royal navy, was appointed Governor. The government of the colony was conferred on a legislature, in conjunction with the Governor and his council. The legislature consisted of delegates elected by the people, but the Governor and his council were appointed by the king. Under the royal government which thus supplanted that of the trustees, Georgia began to flourish and to increase rapidly in population and importance. During the French and Indian war, which broke

out in 1754 (though hostilities were not formally declared until 1756), the upper portions of the colony suffered considerably from the attacks of the Cherokees ; but these Indians, after several defeats, sued for peace and obtained it. In 1763 a treaty of peace was made between France and Great Britain, by which the latter power obtained all the French possessions in North America east of the Mississippi River. Spain, which had joined France in the war against Great Britain and her colonies, ceded to the British government, by the same treaty, her possessions of East and West Florida. At the same time the boundaries of Georgia were extended to the Mississippi River on the west, and on the south to latitude 31° and the St. Mary's River. The Governor of Georgia at this time was Sir James Wright, who had been appointed in the latter part of 1760. Under his able and energetic administration the colony prospered greatly, and for several years nothing of any marked interest interfered with its progress. Emigrants flocked into the country, and four additional parishes were laid off between the Altamaha and St. Mary's Rivers. In ten years from 1763 the exports of the province increased from 27,000 to 121,600 pounds sterling. At the outbreak of the Revolution, in 1775, just forty-two years after the first settlement by Oglethorpe, the population of the colony was not far from seventy thousand.

Georgia shared with the other colonies in the indignation excited by the stamp-act of 1765, and in 1768 Dr. Franklin, of Pennsylvania, was recognized as the agent of Georgia in England. In February, 1770, the legislature issued a declaration of rights. Every influence that could be brought to bear was used to induce the people of Georgia to remain true to their allegiance to Great Britain. Many of the most wealthy inhabitants foresaw that their adherence to the cause of the other colonies

would inevitably result in their pecuniary ruin, and many of the poorer classes, who had little or nothing to risk, perceived plainly their advantage in adhering to the royal government. On the northwest were the Cherokee Indians, on the west the Creeks, on the south a refugee banditti in Florida, and on the east was Governor Wright, backed by the king's ships and soldiers. But notwithstanding the inauspicious outlook for the friends of freedom, the vast majority of the people were favorable to the cause of the colonies. Yet, from the dangers which surrounded them on every side, they were obliged to take their measures with the utmost caution.

On the night of the 11th of May, 1775, a quantity of powder stored in the magazine at Savannah was seized by the patriots, and in July a British vessel, which had arrived at Tybee with thirteen thousand pounds of powder for the use of the British troops, was seized by thirty volunteers, under the lead of Commodore Brown and Colonel Joseph Habersham. The powder was carried to Savannah and secured in the magazine. Five thousand pounds of it were sent to the Continental army at Boston. On the 28th of January, 1776, Sir James Wright, the royal Governor, was made a prisoner, but on the 11th of February he succeeded in making his escape to a British man-of-war lying in the mouth of the Savannah River. In February, Archibald Bullock, John Houstoun, Lyman Hall, Button Gwinnett, and George Walton were elected to represent the province in Congress, of whom the last three signed in behalf of Georgia the memorable Declaration of Independence of July 4, 1776, the first two having been prevented, by important business of the State, from taking their seats in Congress.

During the first two years of the war for independence Georgia escaped any serious invasion. In November,

1778, Sir Henry Clinton sent two thousand men, under Lieutenant-Colonel Campbell, and a fleet under Admiral Hyde Parker, against Savannah. On the 29th of December the British occupied Savannah, after defeating the Americans. Colonel Campbell soon after marched to the northward, and occupied Augusta on the 1st of February, 1779. On the 14th of the same month Colonel Boyd, who, at the head of a large body of Tories, was on his way to unite with the main British army, was attacked by Colonels Pickens and Clarke, at the head of some Carolina and Georgia militia, and totally defeated. Boyd himself was mortally wounded, and died on the battle-field. In consequence of this battle Colonel Campbell was ordered by General Prevost, the commander of the British forces in Georgia, to abandon Augusta, which he did, continuing his retreat to Hudson's Ferry, fifty miles above Savannah. Encouraged by these successes, General Lincoln sent General Ashe to take position at Brier Creek, with about two thousand men under his direct command, and two thousand more within supporting distance. On the 3d of March General Ashe was surprised and utterly defeated by General Prevost, and thus the plans of General Lincoln for the recovery of Georgia were completely thwarted. In September of the same year General Lincoln was joined by a French land and naval force under Count D'Estaing. The combined armies now laid siege to Savannah, and on the 9th of October made an assault, in which they were repulsed with the loss of nearly one thousand men. After this repulse the siege was abandoned, the French fleet sailing to the West Indies, and General Lincoln retiring to Charleston, in South Carolina. While the allied armies were before Savannah, Colonel John White, of the Georgia line, by a skilful stratagem, captured five British vessels, one hundred and thirty

stands of arms, and one hundred and eleven British soldiers.

In April, 1780, Sir Henry Clinton captured Charleston, South Carolina, and with it the American army of nearly five thousand men, commanded by General Lincoln. Large bodies of British troops were now sent out, which occupied Camden and Ninety-Six in South Carolina and Augusta in Georgia. It now seemed as though both South Carolina and Georgia were completely subjugated ; but the people were soon roused to resistance, and rallying to the standards of such men as Sumter, Marion, and Pickens, in South Carolina, and Clarke, Dooley, Jones, and Few, of Georgia, they waged an active partisan warfare, never relaxing their efforts until the final great triumph of the American arms. In July the struggling patriots were encouraged by the news that Gates, the victor of Saratoga, was advancing with an army to their assistance ; but their hopes were destined to bitter disappointment, and the almost utter annihilation of the army of relief at Camden brought them once more to the verge of ruin. In the midst of disasters, gathering thick on every side, Colonel Elijah Clarke was bold enough to attempt the capture of Augusta, in which he came very near success, but was obliged to retreat on the approach of a large British force. The defeat of the British at King's Mountain, on the borders of North and South Carolina, and the advance of General Greene into South Carolina, in 1781, enabled the partisan bands of the Georgia leaders to assume once more the offensive. After Greene had cleared the upper portions of South Carolina of the enemy he sent Colonel Lee to assist Pickens and Clarke, who had already commenced a siege of Augusta. On the 5th of June, 1781, the British garrison at Augusta surrendered, and in September, by the important battle

of Eutaw Springs, Greene rescued Carolina and Georgia from the grasp of the invader. On the 19th of October the surrender of Cornwallis at Yorktown, Virginia, completely broke the British power in America, and secured the independence of the colonies.

Yorktown was the last great battle of the war. Henceforth there were no important movements of the armies, but there did occur several skirmishes between detachments of British and Americans. After the surrender of Cornwallis, Washington sent General St. Clair, with the brigades of Gist and Wayne, to the support of General Greene in South Carolina. General Wayne was immediately ordered to Georgia, which State he entered early in January, 1782. He immediately determined to keep the British within their lines at Savannah. The activity of Wayne's dragoons and of the Georgia Legion, commanded by Colonel James Jackson, drove the enemy within their lines, but not until after they had destroyed all the provisions within the neighborhood of Savannah which they were unable to carry with them into the city. The British commandant of Savannah, Brigadier-General Clarke, sent expresses to the Creek and Cherokee Indians urging them to come to his assistance; but the defeats inflicted on them by General Pickens and by Colonels Lee and Elijah Clarke had in a great measure discouraged them, and caused the greater part of them to remain neutral. On the night of the 23d of June, however, three hundred Creek Indians, under the lead of a chief named Guristersigo, surprised the camp of Wayne, but were routed after a short and spirited conflict, leaving their chief and seventeen warriors dead on the field. One hundred and seventeen pack-horses loaded with booty also fell into the hands of the Americans. The loss of the Americans in this affair was four killed and twelve

wounded. This was the last fight that occurred in Georgia during the American Revolution. Soon after this the British general in Savannah opened negotiations with General Wayne, looking to the protection of the persons and property of such loyalists as might wish to remain in the city after its evacuation by the British troops. Major Habersham, of the Georgia line, was employed by General Wayne in the conduct of these negotiations. On the 11th of July, 1782, Savannah was evacuated by the enemy. On this occasion Colonel James Jackson, of the Georgia Legion, who had been selected by General Wayne to receive the formal surrender of the town, was met at the principal gate by a committee of British officers, from whose hands he received the keys of the city.

On the 30th of November, 1782, a provisional treaty of peace was signed at Paris, in France, between five commissioners on the part of Great Britain and four on the part of the United States. The final treaty was signed at the same place, September 3, 1783. The first article of the treaty was in these words: "His Britannic Majesty acknowledges the said United States, viz., New Hampshire, Massachusetts Bay, Rhode Island and Providence Plantations, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia, to be free, sovereign, and independent States." At the same time England made peace with France, Spain, and Holland, ceding to Spain her possessions in East and West Florida.

During the war of the Revolution the bond of Union between the States was the "Articles of Confederation," which had been proposed by Congress eight days after the Declaration of Independence, and adopted by most of the States as early as 1777, though Maryland did not

accede to them until near the close of the war, in 1781. Soon after the close of the Revolution it became evident that if the Union was to be permanent there must be a stronger bond of union than the Articles of Confederation. During the war the struggle for independence was in itself sufficient to bind the States together, but after the war it became necessary to define more clearly the powers of the States and of the general government. On the 14th of May, 1787, a convention of delegates from all the States, except Rhode Island, met in Philadelphia, and after mature deliberation formed the Constitution of the United States, and recommended it to the several States for their adoption.

On the 2d of January, 1788, the Constitution was adopted in behalf of Georgia by a convention of delegates from the different counties of the State, assembled in the town of Augusta, at that time the capital. The following is a list of the delegates of the ratifying convention, in the order in which their names were signed :

John Wereat, President, and delegate from the county of Richmond.

William Stephens, Joseph Habersham, Chatham County.

Jenkin Davis, N. Brownson, Effingham County.

Edward Telfair, H. Todd, Burke County.

William Few, James McNeil, Richmond County.

George Matthews, Florence Sullivan, John King, Wilkes County.

James Powell, John Elliott, James Maxwell, Liberty County.

George Handley, Christopher Hillary, J. Milton, Glynn County.

Henry Osborne, James Seagrove, Jacob Weed, Camden County.

Jared Irwin, John Rutherford, Washington County.

Robert Christmas, Thomas Daniell, R. Middleton, Greene County.

No sooner had the government of the United States under the new Constitution been established than Georgia, in common with the other States, began to increase rapidly in wealth and population. It is beyond the scope of this brief sketch to go into a full account of the various difficulties and negotiations with the Creek and Cherokee Indians from the establishment of independence to the time of the final removal of the Indian tribes to the territory allotted them beyond the Mississippi. Suffice it to say that, notwithstanding all her troubles with the Indians, Georgia's growth in population, wealth, and power, was rapid.

Between the years 1791 and 1795 most of the public lands possessed by the different States had been disposed of and had become individual property. Land speculators now turned their attention to Georgia. In 1794 and 1795 the legislature passed an act known as the "Yazoo Land Act," conveying to four associations thirty-five million acres of land for five hundred thousand dollars, lying between the Mississippi, Tennessee, Coosa, Alabama, and Mobile Rivers. The sale of this land produced great excitement throughout Georgia, for it was known that all in the State legislature who voted for the bill, with one or two exceptions, were directly or indirectly bribed.

General James Jackson, of Georgia, then United States Senator, used every effort to prevent its ratification by Congress; but all his efforts failed, and the bill ratifying the sale of these lands passed both houses of Congress,—the House of Representatives by a majority of ten, and the Senate by a majority of two. In 1795 Senator

Jackson resigned his seat, and, returning home, was elected to the legislature, by whom he was appointed a member of the committee to investigate the conduct of the previous legislature. The whole corruption was exposed; the Yazoo Land Act was repealed; and it was resolved by the legislature to express their abhorrence of it by committing the records of the act to the flames. Accordingly, they were burned in the presence of the two houses of the legislature. An act was also passed ordering the purchase-money for the Yazoo lands to be restored to those from whom it came, or to whom it might belong. This solemn repudiation of the sale, however, by no means tended to settle the question, and nearly twenty years elapsed before the matter was brought to a final settlement. In 1803 Georgia ceded to the control of the general government all her lands west of the Chattahoochee, embracing nearly one hundred thousand square miles of territory, out of which the States of Alabama and Mississippi were afterwards formed.

Soon after Thomas Jefferson's inauguration as President, in 1801, the new administration began to turn its attention to efforts to secure from Spain the free navigation of the Mississippi River. The President was informed, however, that Spain had, by a secret treaty in 1800, ceded Louisiana to France. Mr. Jefferson accordingly determined to treat upon the subject with Napoleon Bonaparte, then first consul of France.

On the 30th of April, 1803, a treaty was made by which France ceded to the United States, for the sum of fifteen million dollars, the territory of Louisiana, at that time embracing all the vast extent of country between the Mississippi River and the Rocky Mountains. The acquisition of this territory by the United States was of great benefit to Georgia, for during the Spanish occupation of

Louisiana the Indians on the western border of Georgia were often incited to hostile acts by Spanish agents. No longer suffering to any extent from the incursions of the Indians, new counties were laid off and towns and villages sprang up in the wilderness. In 1807 the new town of Milledgeville became the seat of government.

In 1812 war broke out between the United States and Great Britain. The war was of short duration, and Georgia escaped invasion, though on her western border the Indians were aroused to deeds of hostility by the influence of the Northwestern Indians, who had themselves been incited by British agents. On the 30th of August, 1813, the Creek Indians surprised Fort Mims, on the Chattahoochee River, and massacred nearly three hundred men, women, and children. The militia of Georgia and Tennessee were called out to oppose the Indians,—the Georgia troops being commanded by General John Floyd, those of Tennessee by General Coffee, the whole force being under the direction of Major-General Andrew Jackson, of Tennessee. The brigade of Floyd defeated the Indians at Autossee and Calleebee, and General Coffee gained a victory over them at Tallashatchee. Finally the Indians were completely crushed by the three great victories gained over them by the Americans, under General Jackson, at Talladega, Emuckfau, and Tohopeka, or the "Horseshoe Bend," in Alabama. After these defeats the savages sued for peace and obtained it. On the 24th of December, 1814, a treaty of peace between the United States and Great Britain was signed at Ghent, in Belgium. Before the news reached America General Andrew Jackson won the brilliant victory of New Orleans. After the close of this war nothing occurred to interrupt the prosperity of Georgia for several years. In February, 1821, Florida passed out of the hands of Spain, the an-

cient enemy of Georgia, being at that time ceded by treaty to the United States.

Soon after the accession of John Quincy Adams to the presidency, which occurred in 1825, there arose a controversy between the State of Georgia and the Federal government, which produced considerable excitement throughout the Union. On the 12th of February, 1825, Duncan G. Campbell and James Meriwether, United States commissioners, made a treaty with the principal Creek chiefs, by which the Indian title to a large extent of territory within the limits of Georgia was extinguished. This treaty was in accordance with the agreement between the Federal government and Georgia in 1803, when Georgia ceded to the general government her lands west of the Chattahoochee, and had been ratified by the United States Senate just before the close of Monroe's administration. A few factious chiefs of the tribe, instigated by certain white men, opposed the treaty, and assassinated Mackintosh, the principal chief, who had signed it. They then called upon the Federal government to repudiate the treaty. With this request the government complied, and made a new treaty with the Indians on the 24th of January, 1826. Meanwhile, George M. Troup, Governor of Georgia, proceeded to take possession of the lands under the first or old treaty. The President ordered the arrest of the commissioners of Governor Troup, who were already engaged in a survey of the lands thus claimed by Georgia. Governor Troup retaliated by ordering the arrest of any parties that might interfere with the commissioners, and declared that, if the Georgians could obtain their rights in no other way, they would repel force by force. This bold opposition had its effect. The surveyors were not interrupted, and the entire domain covered by the old treaty was organized and disposed of

by lottery in 1827. In this controversy the authorities of Georgia were clearly in the right, and in all probability the President would not have been sustained by Congress had he persisted in his course.

On the 31st of May, 1830, an act was passed by Congress, which received the approval of President Jackson, providing for the removal of the Indian tribes that lived east of the Mississippi River to a portion of country lying west of that river. Under this act the Cherokee Indians, who occupied some of the finest lands in northern Georgia, were removed to the Indian Territory, where new homes were assigned them. The Seminole Indians of Florida refused to leave their homes, and in 1835 began a war which lasted until 1842, when they were brought to terms by the capture of their chief, Osceola, and their crushing defeat by General Zachary Taylor at the head of Lake Okeechobee. The Georgia volunteers bore a prominent part in this harassing war, where the miasma of the Everglades was more destructive to life than the weapons of the Seminoles.

In the Mexican war, which broke out May 8, 1846, and ended May 30, 1848, the sons of Georgia were among the foremost in responding to the call of their country, and were distinguished for the fidelity with which they performed the various duties assigned to them. Some of the most distinguished of the officers in the regular army of the United States during that war were from Georgia.

In the lamentable war which arose between the Northern and Southern States of the Union in 1861, Georgia took a very prominent part. An Ordinance of Secession was adopted on the 19th of January, 1861, by a convention of delegates, representing every part of the State, which met in the capitol at Milledgeville. During the

course of the war which followed Georgia furnished not less than eighty thousand soldiers to the Confederate armies, and her sons were distinguished for their intrepid valor on every battle-field from Pennsylvania to Florida, and from Kentucky to the Gulf of Mexico. Georgia escaped invasion until the spring of 1864. Then for months her northern counties were the scene of a mighty struggle between the Federal army of the West, under General Sherman, and the Confederate army, at first under General Joseph E. Johnston and afterwards under General John B. Hood. In the fall of 1864, when General Hood set out with his army on his ill-starred expedition into Tennessee, Georgia was left defenceless, her soldiers being (with the exception of a small militia force) all away from her borders in the armies of Tennessee and Virginia. The way was thus open for Sherman, and he marched unopposed from Atlanta to Savannah, leaving desolation and ruin in the track of his armies. The war virtually closed on the 26th of April, 1865, when the articles of capitulation were signed at Durham's Station, in North Carolina, by Generals Sherman and Johnston. There is no need to go into a detailed account here of the dark days of reconstruction. Suffice it to say that Georgia came forth from the fiery ordeal with her honor untarnished and her courage unabated, and after a desperate struggle with adverse fate is once more on the road to prosperity, wealth, and power.

The decennial increase of Georgia in population from 1790 to 1870, as exhibited by the United States census, is shown by the following table:

1790	1800	1810	1820	1830	1840	1850	1860	1870
82,548	162,686	252,433	340,985	516,823	691,392	906,185	1,057,286	1,184,109

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The increase from 1860 to 1870, though far below the percentage of other years, is very satisfactory, when we consider that during the greater part of that time the prosperity of the State was checked by the four years of war, and the still darker days of reconstruction which followed.

The wealth of Georgia in 1860 was \$672,322,777. Of course a large part of this wealth consisted in slaves. In 1868, four years after the close of the war, the aggregate wealth of the State was \$191,235,520. In 1870 it was \$268,169,000. During the seven years ending with 1875, the wealth of Georgia has increased fifty-two per cent., while that of Ohio increased during the same time only thirty-nine per cent. While Georgia is poor compared with States not injured by the war, she has taken the lead of those that did suffer serious loss, and is contesting closely the ratio of progress with those of the North which not only did not suffer, but even prospered during all the years of strife and gloom.

The Governors of Georgia, from its first settlement, in 1733, to the present time, are as follows:

James Edward Oglethorpe, the civil and military Governor under the Trustees, from July 15, 1732 (eight months before the actual settlement), to June 9, 1752, when the Trustees resigned their charter.

William Stephens, President of the Council and Acting-Governor in the absence of General Oglethorpe from July 11, 1743, to April 8, 1751.

Henry Parker, President of Council and Acting-Governor from April 8, 1751, to October 1, 1754.

John Reynolds, Governor under the crown of Great Britain from October 1, 1754, to February 15, 1757.

Henry Ellis, Governor from February 16, 1757, to October 31, 1760.

James Wright, Governor from October 31, 1760, to July 11, 1782.

James Habersham, President of Council and Acting-Governor from July 2, 1771, to February 11, 1773.

William Ewen, President of Council of Safety under the American government from June 22, 1775, to January 20, 1776.

Archibald Bullock, President of the Provincial Council and Commander-in-Chief from January 20, 1776, to February 22, 1777.

Button Gwinnett, President of Council and Commander-in-Chief from February 22, 1777, to May 8, 1777.

John Adam Treutlen, Governor under the new Constitution of Georgia from May 8, 1777, to January 8, 1778.

John Houston, Governor from January 8, 1778, to December 29, 1778.

John Wreath, President of the Executive Council and Acting-Governor from December 29, 1778, to November 4, 1779.

George Walton, Governor from November 4, 1779, to January 7, 1780.

Richard Howley, Governor from January 7, 1780, to January 7, 1781.

Stephen Heard, President of the Executive Council and Acting-Governor from January, 1781, to August 15, 1781.

Nathan Brownson, Governor from August 16, 1781, to January 8, 1782.

John Martin, Governor from January 8, 1782, to January 9, 1783.

Lyman Hall, Governor from January 9, 1783, to January 9, 1784.

John Houston, Governor from January 9, 1784, to January 14, 1785.

Samuel Elbert, Governor from January 14, 1785, to January 9, 1786.

Edward Telfair, Governor from January 9, 1786, to January 9, 1787.

George Matthews, Governor from January 9, 1787, to January 25, 1788.

George Handley, Governor from January 25, 1788, to January 9, 1789.

George Walton, Governor from January 9, 1789, to November 9, 1790.

Edward Telfair, Governor from November 9, 1790, to November 7, 1793.

George Matthews, Governor from November 7, 1793, to January 15, 1796.

Jared Irwin, Governor from January 17, 1796, to January 11, 1798.

James Jackson, Governor from January 12, 1798, to March 3, 1801.

David Emanuel, President of the Senate and Acting-Governor from March 3, 1801, to November 7, 1801.

Josiah Tatnall, Governor from November 7, 1801, to November 4, 1802.

John Milledge, Governor from November 4, 1802, to September 23, 1806.

Jared Irwin, President of the Senate and Acting-Governor from September 23, 1806, to November 7, 1806.

Jared Irwin, Governor from November 7, 1806, to November 9, 1809.

David B. Mitchell, Governor from November 9, 1809, to November 9, 1813.

Peter Early, Governor from November 9, 1813, to November 9, 1815.

David B. Mitchell, Governor from November 9, 1815,

to March 4, 1817, when he resigned, and William Rabun, President of the Senate, acted as Governor until November, 1817.

William Rabun, Governor from November, 1817, to October 25, 1819, when he died, and was succeeded by Matthew Talbot, President of the Senate, who acted as Governor until November 13, 1819.

John Clark, Governor from November, 1819, to November, 1823.

George M. Troup, Governor from November, 1823, to November, 1827.

John Forsyth, Governor from November, 1827, to November, 1829.

George R. Gilmer, Governor from November, 1829, to November, 1831.

Wilson Lumpkin, Governor from November, 1831, to November, 1835.

William Schley, Governor from November, 1835, to November, 1837.

George R. Gilmer, Governor from November, 1837, to November, 1839.

Charles J. McDonald, Governor from November, 1839, to November, 1843.

George W. Crawford, Governor from November, 1843, to November, 1847.

George W. Towns, Governor from November, 1847, to November, 1851.

Howell Cobb, Governor from November, 1851, to November, 1853.

Herschel V. Johnson, Governor from November, 1853, to November, 1857.

Joseph E. Brown, Governor from November, 1857, to July, 1865.

James Johnson, Provisional Governor (appointed by

President Andrew Johnson) from July, 1865, to December, 1865, serving until an election could be held by the people.

Charles J. Jenkins, Governor from December, 1865, to January, 1868, when he was deposed by General Meade, acting under the reconstruction measures of Congress, and Brigadier-General Thomas H. Ruger, of the United States army, was appointed to act as military Governor until July, 1868, at which time Rufus B. Bullock, elected under the reconstruction measures, became Governor.

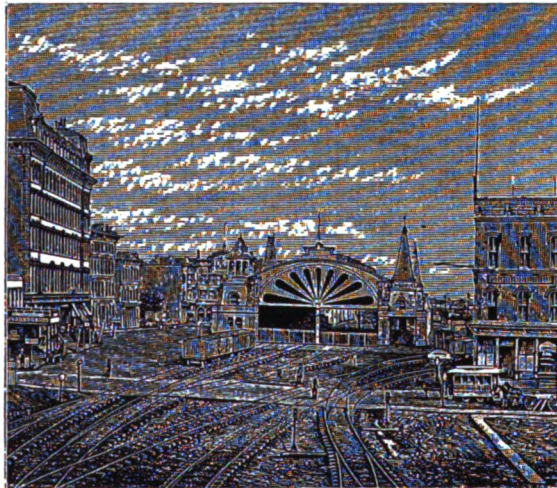
When Governor Jenkins was deposed, he took with him the Great Seal of Georgia, and refused to give it up until a Governor should be elected by the free and untrammelled voice of the people.

On the 30th of October, 1871, Rufus B. Bullock left the State, at the same time resigning the executive office. Benjamin Conley, President of the Senate, then became Governor, and acted as such until January 12, 1872, at which time was inaugurated James M. Smith, who had been chosen at a special election held December 19, 1871, to fill out Governor Bullock's unexpired term. At the election for Governor, held in October, 1872, James M. Smith was re-elected by more than 60,000 majority, which office he held until January, 1877.

When James M. Smith became Governor, ex-Governor Jenkins turned over to him, as the first rightful Governor since January, 1868, the Great Seal of the State. Ex-Governor Jenkins on that occasion received the thanks of the Legislature, and a handsome medal was voted to him for his fidelity to the interests and honor of Georgia. At the election held in October, 1876, General Alfred H. Colquitt, the present incumbent, was elected Governor of Georgia by a majority of more than 80,000. He was inaugurated January, 1877.

CHAPTER II.

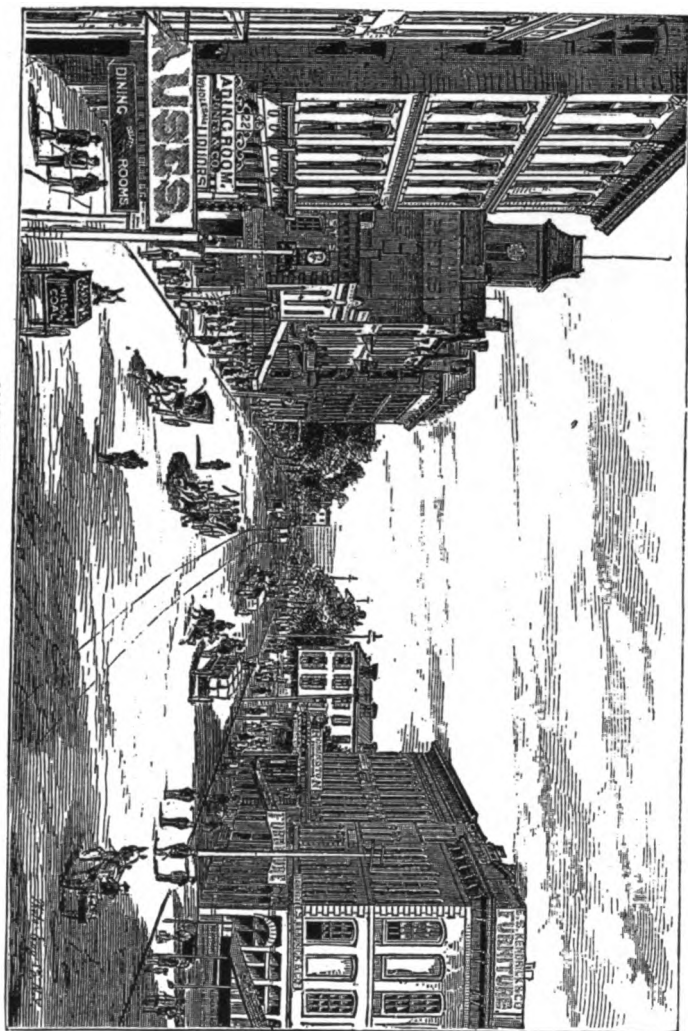
Atlanta and Northwest Georgia—The Western and Atlantic Road, or the Kenesaw Route—Places of Historic Interest—Battles of Atlanta, Kenesaw Mountain, Resaca, Ringgold, Allatoona, Rome, and Chickamauga.



PASSENGER DEPOT AND ENVIRONS, ATLANTA.

No part of Georgia has, of late years, increased more rapidly in wealth and population than the northern section of the State. To this part of Georgia belongs Atlanta, the capital, a city remarkable for its rapid growth as well as for the enterprise and public spirit of its people. In 1837 the southeastern terminus of the Western and Atlantic Railroad was established near the location of the

present General Passenger Depot. It was selected as being the most eligible point for "the running of branch roads to Athens, Madison, Milledgeville, Forsyth, and Columbus." For many years the site thus chosen was known as Terminus. In 1842 there were not more than a half-dozen dwellings. In 1843 the population had increased somewhat, and the village was incorporated with the name of Marthasville, in compliment to the daughter of Ex-Governor Lumpkin, who had been distinguished by his deep interest in the development of railroad enterprise in Georgia. In 1846 Atlanta, derived from the word Atlantic, was suggested as an appropriate name for the embryo city by J. Edgar Thomson, chief-engineer of the Georgia Railroad, in a letter to Mr. Richard Peters, also an engineer of the road. On the 29th of December, 1847, the Georgia Legislature passed an act incorporating as the "City of Atlanta" the town, which was beginning to give evidence of rapid growth. The population at this time numbered about five hundred. By the year 1854 Atlanta had a population of six thousand, and by the census of 1860 the city contained ten thousand inhabitants. In 1864 its population was about fourteen thousand. In the fall of 1864 Atlanta was almost totally destroyed by General Sherman; yet ere the close of the war, in the spring of 1865, the old citizens began to return and to rebuild their ruined homes, and Atlanta arose phoenix-like from her ashes, and, with renewed youth and vigor, started forward on the road to prosperity and wealth. The United States census of 1870 showed a population of twenty-two thousand, and a census taken by the city authorities in 1876 showed the number of inhabitants to be in round numbers thirty-five thousand. Far the greater part of capital invested in Atlanta is *Southern*, and the wonderful recuperation is due, in the main, to native *Southerners*,



MARIETTA STREET, ATLANTA.

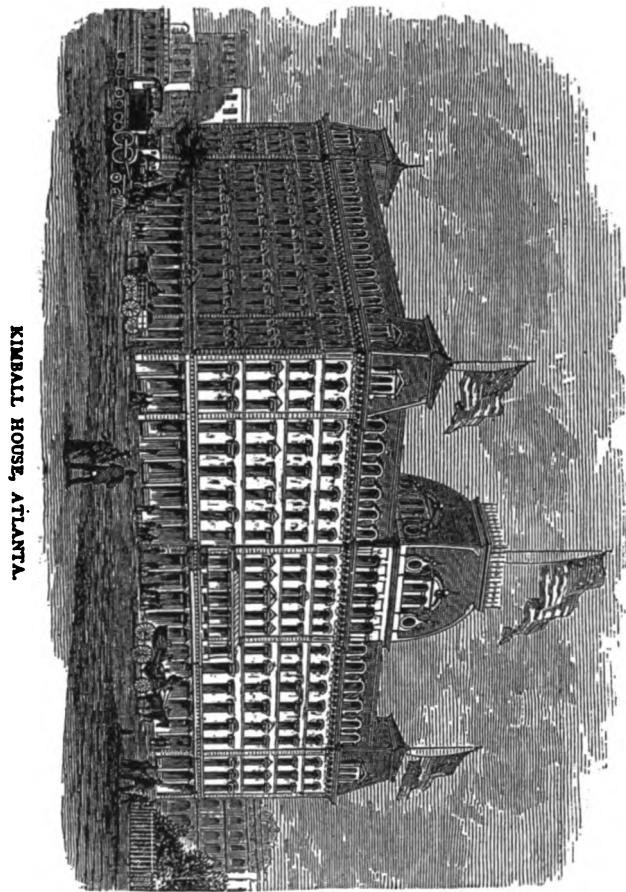
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who have made this city their home, although some of the leading merchants and business men are from the



CORNER OF PEACHTREE AND LINE STREETS, ATLANTA.

Northern States. To the eye of the visitor Atlanta presents the appearance of a young, fresh, and vigorous city. Some of the buildings are of grand proportions, and will compare favorably with those of any city in the Union. The city is well supplied with good hotels, of which the largest are the Kimball House and the Markham House, both in close proximity to the Union Depot, from whence depart all the passenger trains of the different railroads centring in the city. There are a great many very handsome residences in Atlanta, and many of them have beautifully-terraced lawns in front. Atlanta is well supplied with elegant churches, representing all religious denominations. The school system is excellent, ranging from primary to high school, and is regarded with great pride



KIMBALL HOUSE, ATLANTA.

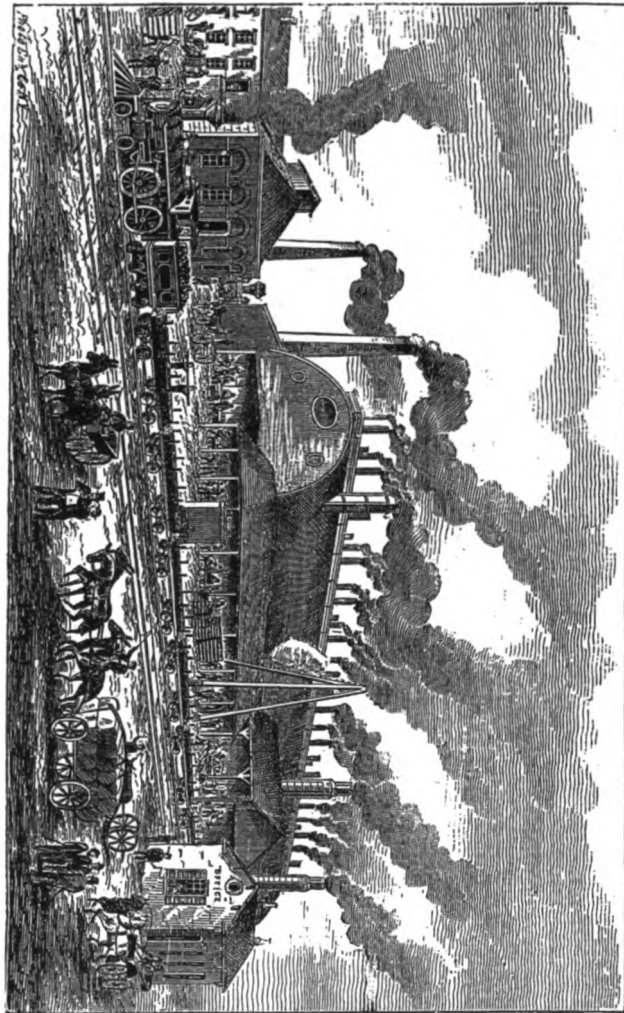
by the citizens. Atlanta has an admirable system of street railroads, traversing the city in every direction. Manu-



MARKHAM HOUSE.

facturing establishments are numerous, and include foundries, machine-shops, agricultural- and terra cotta-works, ice factories, tobacco-factories, two paper-mills, candy- and cracker-factories, a rolling-mill, and a cotton-factory. The Atlanta Rolling-Mill employs about three hundred hands. The annual sales of its products exceed a half-million dollars. One of the largest cotton-factories in the South has recently been built, with ten thousand spindles and all necessary machinery. The factory is run by steam. There is a shoal on the Chattahoochee, within a few miles of the city, where it is contemplated to build a dam and construct a canal, which the citizens claim will give Atlanta a water-power almost, if not fully, equal to that of Augusta or Columbus. Atlanta claims, however,

ATLANTA ROLLING-MILL.



to be independent of water-power, on account of its exhaustless coal supply, brought from two Georgia mines,—the Dade and Castle Rock, which belong to Georgia companies, who have displayed great liberality in sale of coal and in contributions to manufacturing enterprises, having subscribed five thousand dollars to the Atlanta Cotton-



STATE CAPITOL AT ATLANTA.

Factory alone. The officers of these companies are gentlemen, all of whose interests are centred in Atlanta, and

who, of course, will do all that they can to promote the interests of that city. It is estimated that the manufactured products of Atlanta amount annually to five million dollars, and give employment to several thousand hands. During the year 1877 Atlanta received ninety thousand bales of cotton, and the receipts for 1878 will go beyond that figure.

A stranger visiting Atlanta would do well to go to the Geological Bureau in the capitol and view the specimens here collected of minerals, metals, and building stones from all sections of Georgia.

The remark has often been made by visitors from all sections of the Union and by foreigners that more can be learned here of what is in Georgia, in one day, than by weeks of travel, and that this is the only State capitol, except that of New York, in which they have been able to obtain all the information which they desire. Mr. F. W. Werlitz, the agent of a delegation of Germans looking for lands to which immigrants may come, has made a close examination of the soils, minerals, and maps of the collection. Copies of the maps have been solicited by iron men, and forwarded to the Iron and Steel Association of England, the Geographical Society of Berlin, and other like corporations. The headquarters of the State Agricultural Department are also in Atlanta. This department, though only established within the last few years, has already been of great service to the State. The Commissioner of Agriculture is Dr. Thomas P. Janes, to whose work, the "*Hand-Book of Georgia*," I am indebted for important information.

During the summer of 1864, in the vicinity of Atlanta, were fought some of the most desperate battles of the war between the States. On the 20th of July, General Hood attacked the Federals on Peach-Tree Creek, and at

first drove them back and seemed on the point of breaking their lines, but at length was forced to give up the assault, having suffered great loss. Two days later General



VIEW ON PRYOR STREET, ATLANTA, DURING A FLAG
PRESENTATION.

Hood, leaving a force at Atlanta, marched with his main army around to Decatur, and fell upon the Federal left and rear, driving them from their works and capturing twenty-two cannon, eighteen stands of colors, and fifteen hundred prisoners; but General Sherman, bringing forward fresh troops, checked the victorious onset of the Confederates, recovering nine of his captured guns and making some captures of prisoners himself. Both sides claimed the victory in that day's bloody work; the Fed-

erals, because they had at last succeeded in checking the Confederate advance, and the Confederates, because they had driven the Federals from some of their works and had carried off as trophies thirteen cannon and eighteen standards, and for the additional reason that Sherman made no more attempts to flank Atlanta on the east, and waited several days before he began to try on the other side of the city. From the 28th of July, when the fighting was renewed, until the 1st of September, there were constant struggles between portions of the two armies, in some of which the Confederates were successful, and in others, the Federals. On the 2d of September, in consequence of Sherman's successful flank movement on the Macon Road, the city was abandoned by the Confederates. After Sherman left it in ruins on his march to the sea, some Confederate cavalry reoccupied it. No traces of those sad days are now to be seen in the bustling, busy city; and the patriot will pray that no such scenes may ever occur again.

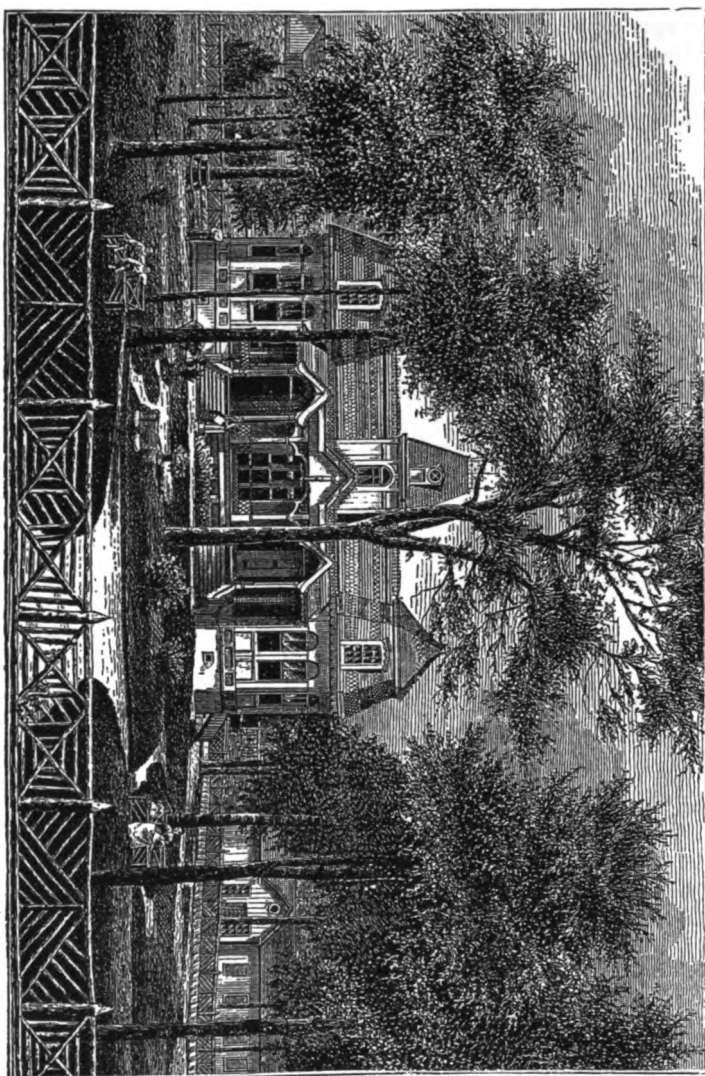
Extensive lines of railway reach out from Atlanta in every direction, bringing into the city a large amount of trade from all sections of Georgia. On the Georgia Railroad (the oldest in the State), sixteen miles from Atlanta, in De Kalb County, stands the celebrated Stone Mountain,—a peak of solid granite nearly two thousand feet in height and six or seven miles in circumference. The Stone Mountain granite is highly esteemed for building purposes, and is extensively used, not only in Atlanta, but also in Augusta, Macon, and other cities and towns of the State. At Kirkwood and Decatur, on the Georgia Railroad, many of the business men of Atlanta have their homes. The Western and Atlantic, or State Road (advertised as the Kenesaw Route), from Atlanta to Chattanooga, passes through a beautiful and well-cultivated country, and the towns and stations along the route pre-

sent a neat appearance. The first station reached after leaving Atlanta is Marietta, a pretty little town of about two thousand inhabitants. The climate is delightful, and many of the citizens of the southern portion of the State spend their summers here. The town has two flour-mills, a sash- and blind-factory, and also one for chairs and barrels. Its educational and religious advantages are excellent. In Marietta there is a National Cemetery, beautifully laid out and well kept. In it lie buried ten thou-



STONE MOUNTAIN.

sand Federal soldiers who lost their lives south of the Etowah in the campaign between Sherman and Johnston. In full view of Marietta, and about two miles and a half from the centre of the town, stands Kenesaw Mountain with its double peak. One may stand upon its summit and see, spread out before him like a grand panorama, the country over which for nearly two months the armies of Johnston and Sherman marched and countermarched, and bitterly fought and struggled with each other, never



"THE OAKS" AT DECATUR. RESIDENCE OF JAMES P. HARRISON, STATE PRINTER.

once losing their grapple, all their movements being attended by bloody engagements between portions of each army and by constant daily skirmishes, in which the roar of musketry on the skirmish line, often accompanied by



PONCE DE LEON SPRING.

the thunder of artillery, could scarcely be distinguished from the sound of a general engagement. On the 27th of June, 1864, Kenesaw Mountain was itself the scene of a bloody battle, in which, after a furious cannonade, the Federal army made a general assault upon the Confederate position, meeting with a bloody repulse and losing more than three thousand men, while the Confederate loss was only five hundred and twenty-two.

But where twelve years ago such dreadful scenes were enacted all is peaceful now. On the hill-sides and in the valleys may be seen in their proper season fields of rustling corn or snowy cotton, and to the ear are borne the

voices of the laborers hallooing to each other, and the shouts of children sporting in the sunshine. Running due north from Marietta is the Marietta and North Georgia Railroad, which is fast approaching completion.

The most thriving town between Atlanta and Chattanooga is Cartersville, in Bartow County, surrounded by a fertile and thickly-settled country. The town has about eighty stores, three hotels, a printing-office, several good schools, and is well supplied with churches. It has a car-factory and two cabinetmakers' shops. The population is about three thousand.

Bartow is one of the best counties in the State. There are in the county four iron-furnaces, which turn out daily many tons of pig-iron. The largest town between Cartersville and Chattanooga is Dalton, in Whitefield County. It is beautifully situated, and, like the other towns of this part of the State, seems to be improving. Its population is about two thousand. At the North Georgia Manufacturing Company's shops various kinds of household furniture are manufactured. The schools are excellent, and the town is well provided with churches. Not far from Dalton, in the adjoining county of Walker, are the Coatoosa Springs, quite a noted place of resort for the people of this section. Surrounded by hills, and in full view of the Cohutta Mountains, the summer climate of Dalton is delightful. The town has two good hotels. The place is the terminus of the Selma, Rome and Dalton Railway.

The whole section of country through which the State Road passes is historic ground. Allatoona is the scene of General Corse's gallant defence of the supplies which were so necessary to Sherman's army; at Resaca was fought a desperate but indecisive battle; at Ringgold, after Bragg's disastrous defeat at Missionary Ridge, the heroic Cleburne, with his brave division, selecting a strong

position, checked the pursuing Federals under Hooker, and saved the Confederate army from destruction. At Chickamauga Creek the Confederates, under Bragg, obtained a victory, which, if properly followed up, would have been the most brilliant of any in the war, and would have prevented the subsequent defeat at Missionary Ridge and have saved Georgia from Sherman's invasion.

All this beautiful section of country was for years the home of the Cherokees, a powerful tribe of Indians, and it was not until during the early part of Jackson's administration that the last remnants of the tribe were removed from their loved homes to the territory provided for them west of the Mississippi River by the government of the United States. This was by many thought to be a harsh measure, but it has resulted in great good, not only to the people of Georgia but also to the Cherokees themselves, and time has proved the wisdom of President Jackson's policy.

The most flourishing town of North Georgia above Atlanta is Rome, in Floyd County, reached from Dalton by the railway which extends to Selma, in Alabama, and connected also by a short railroad of twenty miles with Kingston, a small town on the State Road, south of Dalton. Rome is an enterprising little city of between three and four thousand inhabitants. Among the evidences of thrift is the large rolling-mill of the Nobles Brothers, which gives employment to many hands. One seldom sees prettier scenery than that which meets the eye from the top of Myrtle Hill. Just at its base the Etowah and Oostenaula unite their streams, and under the name of the Coosa roll their mingled waters toward the sea. At the junction of these rivers lies the pretty city, which, together with the beautiful country surrounding it, flanked on the one side by the Etowah and on the

other by the Oostenaula, presents to the eye a charming picture. Rome is a growing town, and has two good hotels, many first-class stores, some beautiful residences, and is well provided with churches and excellent schools. In the southern part of Floyd County, not far from the Alabama line, is the town of Cave Spring. Here is located the Georgia Asylum for the Deaf and Dumb, established by act of the Legislature in 1847. Rome, too, has its memories of the war; for not far from there, in April, 1863, General Forrest captured Colonel Streight and nearly two thousand Federal cavalry. During Sherman's campaign the city suffered greatly, but the scars inflicted by the war are now healed, and a bright future, we trust, awaits this thriving little city. The following extracts from a pamphlet published by the Rome Chamber of Commerce will give some idea of the advantages of this part of Georgia.

NOTED VALLEYS.

"VANN'S VALLEY.

"This charming valley begins at the city of Rome and runs in a southwest direction along the line of the Selma, Rome and Dalton Railroad a distance of eighteen miles, and seems to be suddenly stopped by a cluster of large and beautiful hills, which check its advance at the most delightful little village of Cave Spring. This valley is as lovely and attractive as nature could well make it. There are ranges of high hills on either side, covered with hard woods, interspersed with just pine sufficient to furnish light-wood for fire purposes; and in the autumn season, when the leaves of the other trees have assumed their golden hues, these evergreen pines produce, by their contrast, a most splendid and effective panorama. This noted charming

valley is from one to three miles in width, and is dotted with substantial farm-houses, located near some gurgling spring of pure, cold water, which runs through the farms, and furnishes sufficient water for the stock at all seasons of the year. The soil is of a dark and red mulatto color, and produces equal to the river-bottoms on the Coosa or Oostenaula Rivers, and is filled on the hill-sides with splendid iron ore and marble. A ride through this valley in the evening during Indian summer, and a night sojourn at the beautiful village of Cave Spring, is a treat a stranger should enjoy.

“Cave Spring takes its name from a cave, and a large bold spring that gushes out at the base of one of her commanding hills, some fifty yards distant from the cave. Cave Spring—lovely spot!—a village of churches and schools, surrounded by commanding hills, and filled with springs and lovely streams of pure water, running over pebbly bottoms, seems better suited for a little paradise, or for the home of the good and pure, than anything else. Here the State has erected large and commodious buildings for the Asylum of Deaf and Dumb. The Baptists and Methodists have in successful operation here large schools, male and female. The lands around this charming, lovely little village are not inferior to the blue-grass lands of the State of Kentucky. This place has improved rapidly since the war, and is destined to be a great centre for education in the future. No intoxicating liquors have been permitted to be sold in this village for many long years. Many of the farmers in this productive valley are anxious to reduce the size of their farms, and here is a grand opening for a colony of fifteen or twenty families from the Eastern States who want to settle in a section where peace, order, and quiet predominate, and where religion and education reign supreme. Let the

New England man, who is seeking a home in Florida, visit this lovely and beautiful valley before he settles elsewhere. The health of this valley comes as near perfection as can be on this sin-cursed earth. Send out some practical man to represent you, and examine this most lovely valley, and we feel that we shall show you most desirable locations for quiet, health, and charming homes.

“CEDAR VALLEY.

“This celebrated valley is separated from Vann’s Valley by a range of hills, near Cave Spring, two miles in width. The lands on these hills are very rich, and grow cotton, clover, and the cereals equal to the valley lands. This valley is much wider than Vann’s Valley, and has the appearance, in many places, of a river-bottom. The lands in this valley are equal to the celebrated blue-grass lands of Kentucky. Cedar Creek runs through the valley near Cedar Town, the county site, upon the banks of which have been erected large establishments for the manufacture of pig-metal and other articles of merchandise. Mr. A. G. West, of New York city, is the proprietor of this immense establishment. The citizens in this valley are free-hearted, open, hospitable, and liberal, and are extremely anxious for settlers,—men of enterprise and thrift. Many of the largest farmers are anxious to sell off and divide up their plantations. Visit, by all means, this charming valley in Polk County.

“TEXAS VALLEY.

“This is another productive valley, in Floyd County, about twelve miles northwest from Rome. Lands lie very much like Vann’s Valley, but the soil is a gray sandy loam, has fine timber, splendidly watered by living streams, and capable of settling a colony of fifteen or

twenty families. Good society, good churches, public schools, and exceedingly healthy. It is about two and a half miles wide, and from twelve to fifteen miles long. By all means the stranger should examine this valley.

"BROOM TOWN VALLEY.

"In Chattooga County, about twenty miles from Rome, is one of the loveliest valleys in all North Georgia, and it is in some respects superior to all the valleys mentioned. This valley, to be appreciated, must be visited; its attractions are great, and the soil, timber, water, and health are all that the heart of man can desire. People are quiet, orderly, church-going, and hospitable to strangers. Here is room for a large colony to settle. Then come Chattooga and Armuchee Valleys, both fertile and charming. We invite most cordially our friends in the Eastern States, as well as the Middle States, who feel desirous of moving southward, to visit this beautiful section of the South, and make Rome their headquarters, and they will receive that attention they may need to see a land full of resources, lying dormant for the want of bone and muscle to make it blossom like the rose.

"We have only mentioned some of the most prominent valleys, whilst there are many smaller ones equally as inviting, as well timbered and watered. Sugar Valley, in Gordon County, some twenty miles northwest of Rome, also Ridge Valley, some five miles above Rome, are both worthy of mention, and should be seen to be appreciated. In the latter valley there is a large iron-furnace, called after the name of Ridge Valley. Come, and let us show you the prettiest part of the whole South."

CHAPTER III.

The Air-Line Road and Northeast Georgia—Toccoa Falls—Tallulah Falls—Nacoochee Valley.

SOME of the grandest and most beautiful scenery of Georgia is found along the Air-Line Railroad and the portion of country tributary to it. Up to the time of the completion of this railway, all this section enjoyed but few commercial advantages. The railroad has proved to be a wonderful developer, and all along the route little towns have sprung up, as if by magic. The most important town on this route is Gainesville, situated in Hall County, about fifty-three miles from Atlanta. The upward progress of this town is quite remarkable. Since the advent of the iron horse the value of town property has increased from \$86,000 to \$880,000. The trade of the town, which formerly amounted to \$30,000 annually, is now estimated at \$600,000. The assessment of the county has risen from \$750,000 to \$2,100,000. The town also carries on an extensive trade in chickens, eggs, and butter. The population of Gainesville has increased from four hundred and seventy-two, in 1870, to twenty-five hundred. The distinguished Confederate General Longstreet now lives in Gainesville.

Gainesville has two first-class hotels, the Richmond House and the Piedmont Hotel. The proprietors of the Piedmont Hotel are also proprietors of the Porter Springs, which are delightfully situated among the mountains,

twenty-eight miles north of Gainesville, and reached by a good stage-road. Two miles east of Gainesville, on the Air-Line Railroad, are the New Holland Springs, also well fitted up for the accommodation of visitors. Within one mile of the court-house at Gainesville is the Gower Springs Hotel, to the door of which the street-cars run.

The other towns of the Air-Line Road are Norcross, Buford, Mount Airy, Belton, and Toccoa, which, though but a few years ago without any existence, now contain stores, hotels, churches, schools, printing-offices, and livery-stables. At Mount Airy tourists take the hack for Clarkesville, in Habersham County, formerly a great place of resort during the summer months for the wealthy citizens of the lower sections of the State. Clarkesville was generally the stopping-place of those who designed visiting the Falls of Tallulah and Toccoa, or the valley of Nacoochee; but the railroad has produced a change, and many prefer to make their headquarters at Toccoa City, and from thence visit these various places of interest. Lulu City is the present terminus of a new road which has been constructed to connect the Air-Line with Athens, and, by the branch road which extends from this city to the Georgia Railroad, with the middle portion of the State.* Next to Gainesville, the most important town of this section is Toccoa City, which is also the terminus of the Elberton Air-Line. In 1870 there was no such town. Now it contains a population of about one thousand, and has about twenty-five stores, two hotels, and livery-stables where one can obtain good teams for a trip to the Falls. About two and a half miles from this town are the Falls of Toccoa, on a creek of the same name.

* It is intended to continue this road to Knoxville, Tenn., by way of Rabun Gap.



TOCCOA FALLS.

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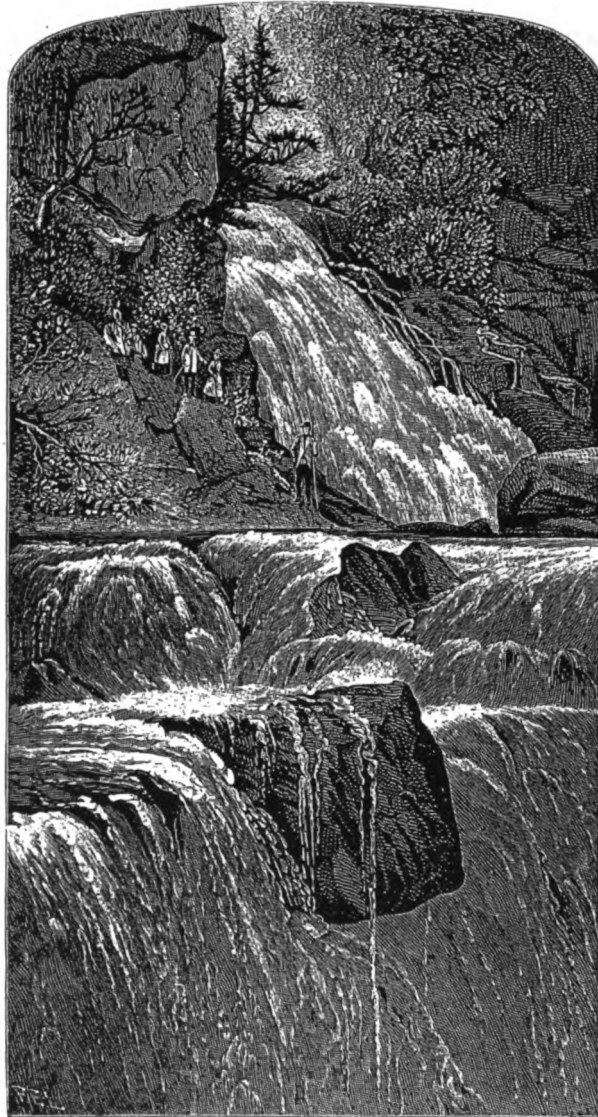
The water falls one hundred and eighty-five feet perpendicular over a ledge of sandstone. No description can give an idea of the beauty of this silvery cascade, descending so gently from the lofty rock, whose sides are plainly seen as if behind a thin veil.

"Toccoa! or The Beautiful! this name
To thee was given by tawny Indian girls,
When, with the summer's sultry noon, they came
To bathe their bosoms where the water curls
Around the mossy rocks in countless pearls;
Or when, in autumn, seeking o'er the hills,
From which thy eddy current lightly whirls,
Brown nuts, their baskets of light reed to fill,
They loved to pause and gaze upon thy beauties still." *

This is a favorite spot for picnics for the people of Toccoa City and the surrounding country. A few feet from the foot of the fall is a little refreshment saloon, with a platform in front for dancing. As you near the Falls there stands back from the road, on a little hill, a small hotel for the accommodation of those who desire to spend a few days in the neighborhood of this pretty cascade.

About fifteen miles from Toccoa City are the celebrated Falls of Tallulah, on the river of the same name. This river is the western branch of the Tugaloo, which is formed by the union of the Tallulah and Chattooga Rivers. The falls are about ten miles above the junction of the rivers. There are four perpendicular pitches of water, of from fifty to eighty feet, and a great many smaller cataracts. The four principal falls are Lodore, Tempesta, Hurricane, and Oceana. Just at the head and also at the foot of the series of falls and rapids the banks of the river are not more than the ordinary height. In the intermediate distance the height of the banks varies

* From a poem by General Henry R. Jackson, of Savannah.



A VIEW AT TALLULAH FALLS.

from two hundred to about eight hundred feet perpendicular. At the Grand Chasm one can look down into an awful gulf and see the narrow stream of the river rushing along eight hundred and sixty feet below him. Between Lodore and Tempesta Falls is a beautiful basin of water called Hawthorne's Pool, so named from a Presbyterian minister who ventured into it for a bath and from some cause unknown sank to rise no more. One should spend several days at these Falls if he wishes to see everything of interest connected with them. The time can be spent both pleasantly and comfortably, for there is a well-kept though rustic hotel, situated just above the head of the rapids, commanding a fine view of the beautiful river. This hotel has been built since the opening of the railroad, and every summer is filled with guests.

Within fifteen miles of the railroad is the lovely valley of Nacoochee, or the "Evening Star," so called, says tradition, from the daughter of a noted Cherokee chief. This maiden possessed wonderful beauty. She was wooed and won by Sauttee, a brave young warrior of the Choctaw nation,—a people who were the bitter foes of the Cherokees. One dark night Nacoochee eloped with her lover. The enraged father summoned a hundred warriors to go in search of his daughter. After days and nights of ceaseless search the lovers were found in their hiding-place among the rocky fastnesses of Mount Yonah. Sauttee was condemned by the old chief to be thrown from the highest precipice of Mount Yonah. The terrible sentence was put into immediate execution in the presence of Nacoochee; but, to the horror of the aged chief, the maiden broke from his strong embrace, and, leaping over the precipice, shared her lover's fate. Nacoochee and Sauttee were buried on the banks of the Chattahoochee in one grave, and a mound raised over

them to mark the spot. Two adjoining valleys now bear the names of the young Cherokee girl and her Choctaw lover.

The valley of Nacoochee is under a high state of cultivation. The handsomest place in the valley is the fine mansion of Captain James Nichols, surrounded by beautiful grounds with flower-gardens, summer-houses, and fountains, artificial lakes, parks for deer, and pools for fishes.

George W. Williams, Esq., a leading merchant of Charleston, S. C., also has a summer residence in this valley. Writing of this country, he says, "The living is good and wholesome. The beef, lambs, kids, and veal are as fat and nice as you could desire. The country abounds in the choicest fruits and vegetables, honey, butter, eggs, and chickens, at reasonable prices. Here you find gushing springs of sweet freestone water, and the mountain air is pure and invigorating. You have neither extremes of heat or cold. They need in all the upper districts hardy, industrious immigrants from the North and Europe; the beautiful streams should be lined with cotton, wool, and other manufactories. The forests are filled with the best timber, such as pine, walnut, chestnut, locust, and maple. Saw-mills are busily employed in preparing lumber for the Atlanta, Augusta, and other markets."

One cannot pass through Northeast Georgia, and notice its natural advantages and beautiful scenery, without believing that a bright future awaits this delightful region.

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CHAPTER IV.

Augusta and Middle Georgia—The Georgia Railroad and Branches— Revolutionary History of Augusta, etc.

Of all the towns of Georgia, Augusta and Columbus take the lead in manufacturing enterprises. In 1847 the Augusta Canal was completed, affording water communication between the city and the country lying along the Savannah River, communication by the river being impossible on account of the rocks and rapids which impede its navigation above the city. The canal also gives to the city a magnificent water-power, and affords splendid sites for factories and mills. The citizens of Augusta have not been slow to avail themselves of these advantages, as any one may see who visits the excellent flour-mills along the banks of the canal, or the "Augusta Cotton Factory," so highly complimented by Senator Sprague, of Rhode Island, as being the best arranged cotton-mill in the United States.

Few cities of the Union present a more attractive appearance than Augusta. Broad Street, the principal thoroughfare, has a length of about two miles, the part between the Upper and Lower Markets being occupied chiefly by commodious stores (over many of which are comfortable residences), and by banks, hotels, and public halls, while the upper and lower portions of the street are mostly given up to private dwellings, the comfort of whose owners is greatly enhanced, not only by the large trees which line the sidewalks, but also by the pleasant

promenade in front of each man's door, afforded by the beautifully shaded avenue, which extends down the centre of the street, with spacious carriage-ways on either side. The streets leading from Broad are well kept and prettily



VIEW OF MONUMENT STREET FROM THE NORTH SIDE OF BROAD,
AUGUSTA.

shaded. But the most beautiful thoroughfare of the city is Greene Street, named in honor of General Nathaniel Greene, the gallant son of Rhode Island, who delivered

the Carolinas and Georgia from the British invaders, and whose body sleeps in Georgia soil near the city of Savannah. Greene Street is almost entirely given up to resi-



PLANTERS' HOTEL.

dences and churches, and a superb avenue, like those in the upper and lower portions of Broad Street, extends through its whole length. Many of the houses stand back from the street, having in front neat gardens of shrubs and flowers, ornamented in many instances with sparkling fountains.

In front of the City Hall, which faces this street, stands a granite shaft, erected to the memory of Lyman Hall, Button Gwinnett, and George Walton, the signers of the Declaration of Independence in behalf of Georgia. Farther down the street is a neat monument of Italian marble reared to the memory of the Confederate dead of Augusta and Richmond County. The Augusta Cemetery is one of the attractions of the city. The grounds are handsomely laid off, and the carriage-ways and walks are

densely shaded, except in the new portion, where the trees are of a more recent growth. Most of these new trees are magnolias, which are arrayed in beautiful green throughout the year. The soldiers' section, in which sleep the remains of many Confederate dead, is carefully tended. At each grave is a marble headstone, and in the centre of



CONFEDERATE CENOTAPH ON GREENE STREET.

the section is a fountain. This portion of the cemetery is under the care of the Ladies' Memorial Association. The ladies of this association are preparing to erect a handsome Confederate monument on Broad Street in the business portion of the city.

The churches of Augusta are neat and substantial build-

ings, and are numerous, almost every Christian sect being represented. The Jews also have a pretty synagogue on Telfair Street.

Augusta enjoys excellent educational advantages, being

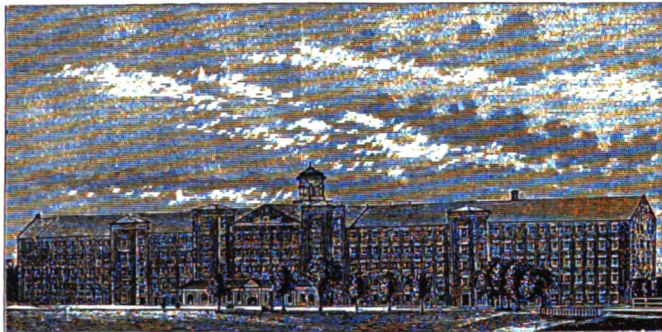


AUGUSTA ORPHAN ASYLUM.

well supplied with good schools. The medical college on Telfair Street is a branch of the State University, and is presided over by an able faculty.

We have already spoken of the Augusta Cotton-Factory.

This was first operated in 1847. It started with a capital of one hundred and forty thousand dollars, which has increased to six hundred thousand dollars, and pays its stockholders handsome dividends annually. At first there were two mills; but the space between them has since been built up and the two united into one. The factory is five stories high, about four hundred and eighty-eight feet



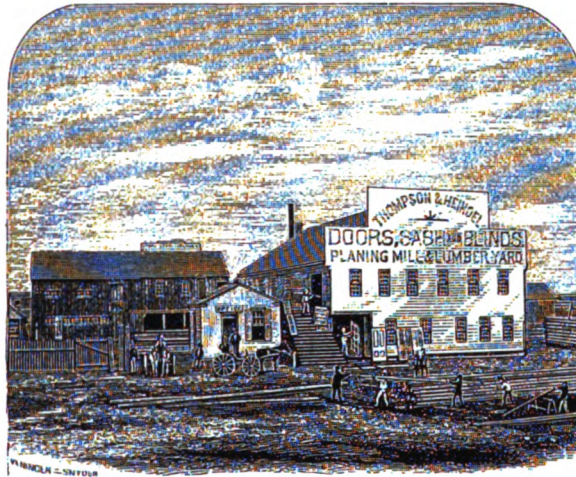
THE AUGUSTA FACTORY.

in length, and fifty-two feet in width. It has twenty-three thousand four hundred and twenty-four spindles and seven hundred and seventy looms, and employs six hundred and twenty-two hands. The number of yards of cotton-cloth turned out from this factory in four weeks is one million one hundred and fifty-eight thousand six hundred and eight. The houses built for the operatives, with the exception of a few frame buildings that were first put up, are of brick, and are neat, substantial, and comfortable buildings. This is one of the best managed mills of the United States, as is shown by the fact that during the great financial pressure of the past few years the factory was run on full time, its full number of hands employed, and good dividends

paid to its stockholders. It has never paid less than eight per cent. annual dividend, and sometimes as high as twenty per cent. About three hundred yards from the Augusta Factory a new mill has just been completed, under the auspices of the "Enterprise Manufacturing Company." It is three stories high, two hundred and thirty-six feet in length, seventy-five feet in width, and runs at present seventy-three hundred spindles, which number the managers propose to increase shortly to twenty thousand. This factory manufactures sheetings and drills. At least a dozen more large mills could be furnished with water-power by the Augusta Canal. An effort is being made now to erect a much larger mill than either of those already mentioned, along that part of the canal once occupied by the Confederate Powder-Mills. Besides the two factories just described, there is the Globe Cotton-Mill, two stories in height, eighty feet long by fifty wide, having one thousand four hundred and forty spindles, and employing forty hands. It manufactures carpet and other warps, twine, thread, etc. Another building on the canal is to be remodelled into a factory, styled the Dublin Mill, the building to be three and one-half stories high, and one hundred feet long by fifty broad. It is expected to contain three thousand spindles and one hundred looms. The charter is one of the best ever granted. The capital stock is one hundred and fifty thousand dollars, with the privilege of increasing to one million dollars. It is intended to manufacture in this mill colored checks. Nearly all the stock has been subscribed in Augusta. Besides the cotton-mills there are along the canal three large flouring-mills, a tobacco-factory, and a rope-factory, the works of the Dixon Fertilizer Company, and the foundry of Pendleton & Brothers, all of which are thriving and prosperous. On the other side of the city, fronting the river,

is Simmons's Waste-Factory, a handsome two-story brick building, affording employment to many hands.

There are three large planing-mills in Augusta, where



PLANING-MILL OF THOMPSON & HEIDEL.

doors, sashes, and blinds are manufactured. At the machine-shop of Neblitt & Goodrich cotton-gins and cotton-presses are also manufactured. There are besides three large iron-foundries, which are prepared to manufacture portable, stationary, and steamboat engines and boilers, sugar- and grist-mills, mining-machinery, gas-works, iron railings, and threshing-machines. At the Georgia Railroad shops excellent freight cars and handsome passenger coaches are made. There is also on McIntosh Street an ice-factory which turns out daily twenty thousand pounds. In the southern limits of the city the Patapsco Fertilizing Company have a large guano manufactory. The population of Augusta was fifteen thousand three hundred and

eighty-nine in 1870, and increased by 1873 to nineteen thousand eight hundred and ninety-one. A company, styled the "Augusta Land Company," has recently purchased a large tract of land on the western borders of the city, which has been laid out in streets and divided into lots. It is hoped by the gentlemen engaged in the enterprise that in a few years this will be one of the handsomest parts of the city. According to a census taken for the City Directory of 1877, the population of Augusta is twenty-three thousand seven hundred and sixty-eight. Augusta is an important railroad centre, and has also some river commerce. It is connected with Atlanta, Athens, and Macon by rail, with Savannah both by rail and water, and by rail with Columbia, Charleston, and Port Royal, in South Carolina. Augusta receives somewhere in the neighborhood of two hundred thousand bales of cotton yearly. During the summer season the watermelon crop of Richmond County forms an important element of trade. Some of the melons are very large, weighing as high as fifty and sixty pounds. Thousands of them are shipped to New York and other cities. The shipments have in some seasons run as high as two hundred and forty thousand.

Augusta is one of the oldest places in Georgia, having been laid out by General Oglethorpe in 1735. During the War of the Revolution the town changed hands frequently. Early in 1779, and soon after the fall of Savannah, it was occupied by the British, but was reoccupied by the Americans after their victory at Kettle Creek, in Wilkes County. After the defeat of the Americans at Brier Creek, their failure in the assault on Savannah, and the fall of Charleston, Augusta was again taken by the British, under Colonel Brown, who continued to hold it until near the close of the war, repulsing on one occasion

a vigorous attack by Colonel Elijah Clarke, the Marion of Georgia. On the 5th of June, 1781, Colonel Brown was forced to surrender Augusta and the British garrison to the combined forces of Pickens, Clarke, and "Light Horse Harry Lee." St. Paul's Episcopal Church now stands where stood Fort Cornwallis, and not far from the Upper Market, on Broad Street, stood Fort Grierson, whose commander was slain after his surrender by an unknown marksman in revenge for the many cruelties practised by him upon American prisoners in the day of his power.

During the disastrous war between the North and South, Augusta escaped unscathed, although here were situated the great Confederate Powder-Mills, the most extensive work of the kind ever constructed in America, and at Summerville, on the sand hills, stood the large armory built by the Confederate government. The only effort made to capture the city was by the cavalry of General Kilpatrick; but that officer was defeated at Aiken, in South Carolina, by General Wheeler, and thus Augusta escaped the fate of Atlanta and Columbia.

The suburban villages of Augusta are delightful, and are connected with the city by pleasant drives. In Woodlawn, Harrisonville, and Summerville many of the well-to-do business men of the city have their residences. Nowhere can there be found a pleasanter place for a summer residence, or for a winter resort for Northern invalids, than Summerville on the Sand Hills, which is connected with the city by a continuation of the street railroad. Many celebrated men of Georgia have had their homes in Augusta. Among her distinguished citizens she numbers ex-Governor Charles J. Jenkins and Judge John P. King. This city was for many years the residence of Richard Henry Wilde, the author of "My

Life is like the Summer Rose," and several other pretty poems.

The most important towns on the Georgia Railroad between Augusta and Atlanta are Greensboro', Madison, Covington, and Conyers, all flourishing and pretty places. At Oxford, near Covington, is Emory College, under the control of the Southern Methodist Episcopal Church, one of the best institutions of learning in the South. There are female colleges at Greensboro', Madison, and Covington. Crawfordsville is the home of Georgia's great statesman, Alexander H. Stephens. At Decatur, a pleasant little village six miles from Atlanta, is the residence of another distinguished son of Georgia,—General John B. Gordon, United States Senator.

The middle section of Georgia is the most thickly settled portion of the State, and is inhabited by a refined and cultivated population. The towns and villages are neat and pretty, and present a thrifty appearance. The lands along the creeks and rivers are exceedingly fertile, and produce the most abundant crops of corn and cotton, or of any of the grains that can be raised in any part of the United States. Some of the lands, as may be seen by travellers on the railroads, have been worn out by improper cultivation, but with suitable care these can be easily restored to their original productiveness. To show what may be done even on the worn-out lands, we insert the following extract from a letter of Mr. Samuel Baily, a Northern gentleman, who has been living in the South since 1853. He says:

"I came from Athens, Georgia, to Maxey's (in Oglethorpe County), where I now reside, in 1856. I was a mechanic by trade, and superintended the Oglethorpe Fertilizing Works at this place. In 1868 I purchased a small place which every one considered almost worthless

for farming purposes. When I commenced farming my means were quite limited. The first year I took up sixteen acres, commenced ploughing deep and subsoiling, getting all washes levelled as near as possible. I sowed one acre in wheat and fifteen in cotton. The yield from those sixteen acres was fifty-seven bushels of wheat and eleven bales of cotton, weighing four hundred and sixty-five pounds each. I will state here that the wheat which I raised that year took the premium at the first State Fair in Macon, and my cotton brought the highest market price. I have always advocated deep culture and thorough preparation of the lands before planting, more especially when manuring highly either with barn-yard or commercial manure. I have given special attention to drainage of land, stopping all washes. I have used the manures manufactured at our fertilizing works, but consider barn-yard and cotton-seed and such to be more lasting and permanent. By saving all the manures accumulated on my place I have brought my lands up to what is considered in Middle Georgia a high state of cultivation, and now will make in an ordinary crop year from thirty-five to forty bushels of wheat and one bale of cotton per acre on an average, without the aid of any manuring. Besides field-crops, I have met with the best results in all kinds of fruits grown in Georgia, such as peaches, pears, apples, strawberries, etc. I have also grown all kinds of vegetables in abundance for family use, and have sold annually Irish potatoes, onions, and watermelons. Last year I gathered and sold from one-eighth of an acre twenty-eight bushels of strawberries, which were of a superb variety (the Wilson Albany). I have always found the people in this part of the State hospitable and obliging, and consider this country of superior advantage to any other. I have worked each year on an average two full

hands, and I consider my net gains about one thousand dollars per annum since I commenced farming."

It must be remembered that the above results were obtained from so-called worn-out land that was considered worthless. If so much can be accomplished in soil of that kind, what can be done on the rich and fertile lands of the State?

Mr. J. H. Echols, formerly of Oglethorpe County, but now a commission merchant of Augusta, was the first to introduce a variety of the improved "Long Staple," called Moina Cotton. It is a hybrid from the best "Sea-Island" and "Upland Prolific," and was brought to its present perfection by a South Carolina planter on the coast of Texas. It is one of the most wonderful results of hybridism that has ever been produced by agricultural experiment, and after ten years of cultivation is the best Upland Long Staple in the country. This cotton has been sold as high as forty cents, in gold, per pound, and the seed for ten dollars per bushel, in the Augusta market.

Good lands are to be found in all sections of Georgia, and in any portion of the State one can find cultivated society and excellent schools, and enjoy religious advantages equal to those of any part of the Union.

On the Macon and Augusta Railroad, the principal places are Warrenton and Sparta, both pretty towns, and Milledgeville, the former capital, an interesting little city of three thousand inhabitants. The old State-House is a neat building in the gothic style of architecture. At Milledgeville is located the Georgia Penitentiary. About one and a half miles from the city, at Midway, is the Georgia Asylum for the Insane. Milledgeville is connected with the Central Railroad by a branch road, whose northern terminus is Eatonton, one of the pleasantest towns of Middle Georgia. Both Milledgeville and

Eatonton are situated in the midst of a rich cotton country. Near Sparta is the home of Bishop George F. Pierce, one of the foremost ministers of the gospel in America. Here also dwells the venerable Dr. Lovick Pierce, the father of the bishop, a man remarkable for his eloquence, piety, and zeal.

At the terminus of one of the branch roads of the Georgia Railway is the beautiful town of Washington, in Wilkes County, with a population of about fifteen hundred. This place was known during the War of the Revolution as Heard's Fort, and here the Legislature met when the British were in possession of Augusta. Washington is the home of Hon. Robert Toombs, formerly United States Senator from Georgia.

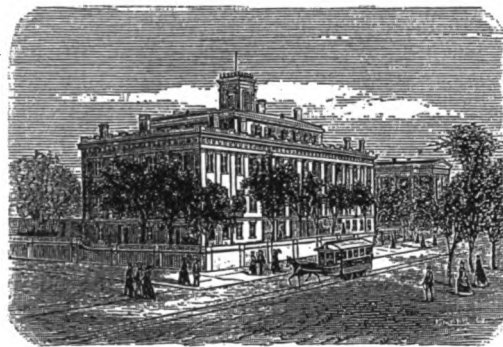
Union Point, on the Georgia Railroad, is the junction of the Athens Branch, a road whose terminus is Athens, the seat of the State University, a charming little city of nearly five thousand inhabitants, beautifully situated upon the banks of the Oconee. Besides the State University, Athens boasts an excellent female college, the Lucy Cobb Institute, a beautiful building in a lovely portion of the city. The society of Athens is elegant and refined. Here some of the most distinguished sons of Georgia have had their homes, men renowned as statesmen, as jurists, as ministers of the gospel, and last, though not least, as educators of the young. Among her distinguished men, Athens can point with pride to Judge Joseph Henry Lumpkin, Rev. Hope Hull, Rev. Moses Waddel, Hon. Howell Cobb, General Thomas R. R. Cobb, Hon. Benjamin Hill, Rev. Dr. Lipscomb, and many others. No place of its size in the United States can excel Athens in the advantages which it offers, both social, educational, and religious. Athens is also a town of considerable trade, and there are located here two flourishing cotton-

factories and one foundry. In the county (Clarke) are two other cotton-factories and one woollen. In all of these mills combined there are thirteen thousand four hundred and fifty spindles and three hundred and fifty-three looms. Athens is connected with Lula City on the Air-Line by the Northeastern Railroad, which traverses a fine section of the State.

CHAPTER V.

Macon, Columbus, and Western Georgia—Central Railroad and Branches—Atlanta and West Point Railroad—Places of Interest—Battles of Jonesborough, Griswoldville, Newnan—Affair at West Point.

MACON, the fourth city of Georgia, is situated on both sides of the Ocmulgee River, at the head of steamboat navigation, and is also in the middle section of the State. It is surrounded by a productive country, and is connected by rail with the cities of Atlanta, Columbus, Augusta, Savannah, Albany, and Brunswick. The first



WESLEYAN FEMALE COLLEGE.

lots were sold in 1823. It is now a thriving and beautiful city of eleven thousand inhabitants. It has an extensive trade, two large foundries, a cotton-factory, flouring-

mills and planing-mills. Its yearly receipts of cotton are seventy-five thousand bales.

Macon might appropriately be called "the city of colleges." The Wesleyan Female College, belonging to the Southern Methodist Church, ranks among the best institutions of the kind in the Union. It has the honor of being the first college in the United States to confer



MERCER UNIVERSITY.

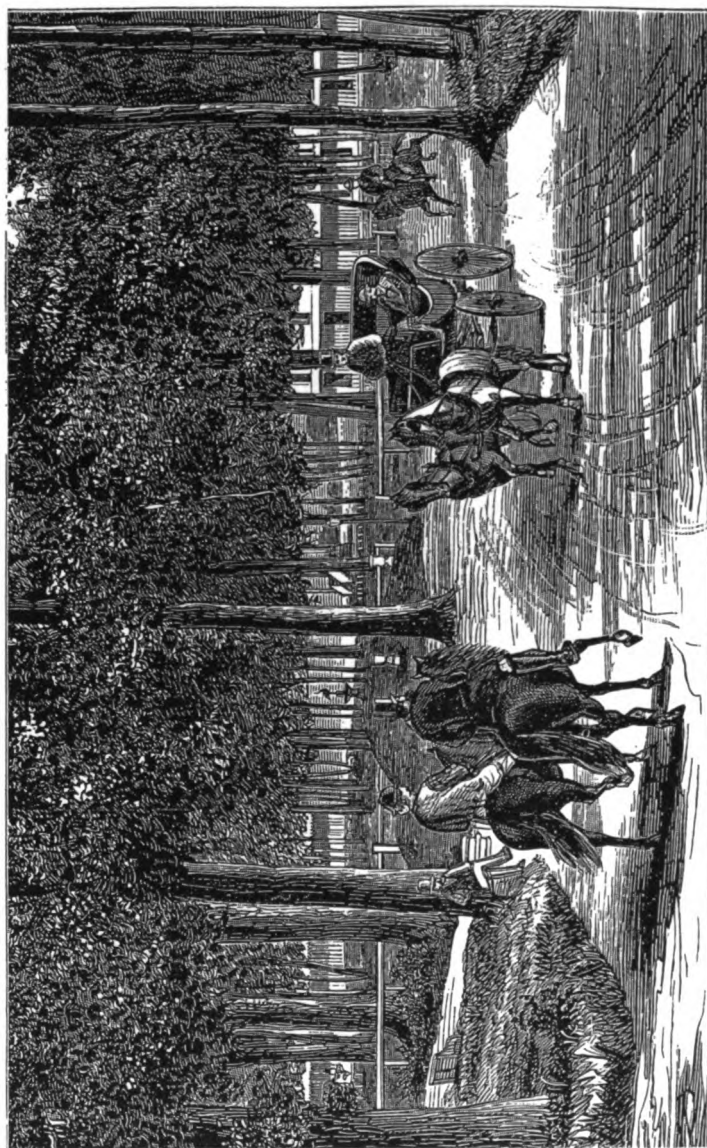
diplomas upon females. Another excellent institution of learning is the Mercer University, under the control of the Baptist denomination, which was formerly located at Penfield, in Greene County, but, since the War of Secession, has been removed to Macon. The Pio Nono College, a large and handsome building, has been lately erected under the auspices of the Roman Catholic Church of Georgia.

At Macon is also located the Georgia Academy for the Blind. In addition to these seminaries of learning,



COURT-HOUSE AT MACON.

Macon is provided with an excellent system of public schools. The city has some handsome public buildings and many beautiful residences. A favorite place of resort is the Central City Park, handsomely laid out along the banks of the Ocmulgee. Here the State Fair is held every second year, on which occasions the beautiful walks and drives present a gay appearance. Vineville, one mile



VIEW IN CENTRAL CITY PARK, MACON.

from the city, is a pleasant retreat, with beautiful homes, surrounded by pretty lawns and gardens. About half a mile from the city, on the banks of the river, is situated the Rose Hill Cemetery, much admired by all visitors.

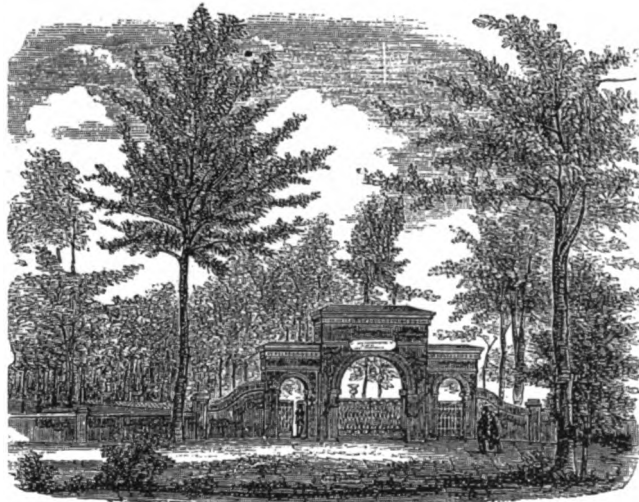
Macon escaped the ravages of the war. In 1864 it was threatened by General Stoneman, in command of a large cavalry force, but Stoneman was driven off, pursued and captured, with one thousand of his men. In the spring



VIEW ON SECOND STREET, MACON.

of 1865 it was taken by General Wilson's cavalry expedition, but the Federal troops were immediately withdrawn upon the news of the capitulation of Johnston's army in North Carolina. At Griswoldville, on the Central Railroad, not far from Macon, during Sherman's march to the sea, occurred a desperate fight between a division of

the Federals and a body of State troops, in which the latter were worsted.

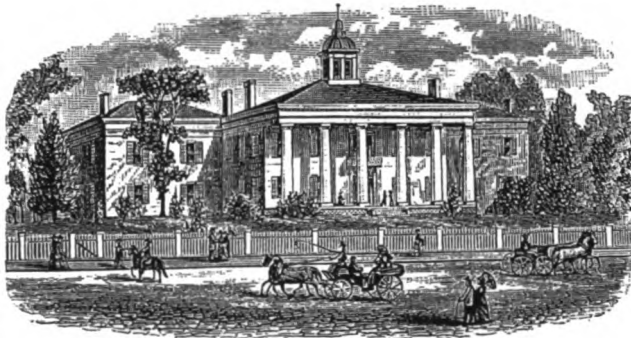


ENTRANCE TO ROSE HILL CEMETERY, MACON.

On the Central Railroad, between Macon and Savannah, there are no large towns; but there are several thriving towns on the Macon and Western and Southwestern Railroads, both of which important highways of commerce are under the control of the Central, of which they are the two most important branches. On the Ocmulgee River, below Macon, is Hawkinsville, a town of considerable trade, connected by a short railway with the Macon and Brunswick Railroad. At Eastman, in Dodge County, on the last-named road, some Northern gentlemen have recently erected the Uplands Hotel, a first-class house for the accommodation of persons seeking a pleasant winter resort, free alike from the malaria of the low swamp-lands along the coast and from the cold winds of

Upper Georgia. The village of Eastman is some six hundred or seven hundred feet above tide-water, and the air of these pine uplands is recommended by prominent physicians as having a healing virtue in bronchial and pulmonary complaints.

Connected with Macon by the Southwestern Railroad is Columbus, the fifth city of the State, at the head of steamboat navigation on the Chattahoochee, the greatest manufacturing centre in the South. Together with its immediate suburbs, Columbus embraces a population of about fifteen thousand, but the city proper contained, by



COLUMBUS FEMALE COLLEGE.

the census of 1870, only about eight thousand inhabitants. Just before the close of the late war it was captured by Wilson's cavalry, and its mills destroyed; but these have been rebuilt and greatly enlarged. There are six cotton-factories, four running by water and two by steam, viz., Eagle and Phoenix Mills, Nos. 1 and 2, Muscogee Mills, and Columbus Factory Mills, all being of large capacity; one steam cotton-mill for yarns only, and another steam factory for stripes and checks only. Besides these there

is a steam bagging-factory, which daily turns out an excellent article of bagging. The Eagle and Phoenix



PERRY HOUSE.

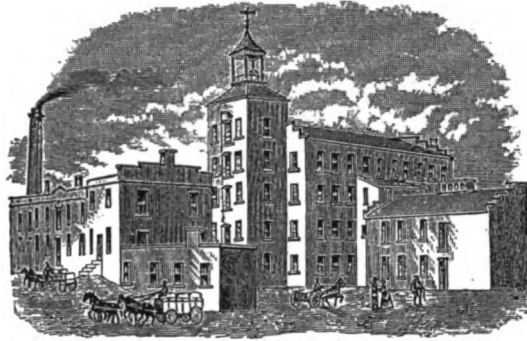
Manufacturing Company have lately purchased what is known as the Palace Mills ground and water-lot, and have erected thereon a new mill, which makes their mill the largest ever erected in the South. The Eagle and



SPRINGER OPERA-HOUSE.

Phoenix Mills manufacture a superior article of woollen goods, and also the celebrated cotton blanket. There

are also in the city two large flour-mills, four smaller grist-mills, one kerosene oil factory, two saw-mills, one



MUSCOGEE MILLS.

wagon-factory, making an article that competes with those of Northern and Western build, one extensive plough-factory, two iron-foundries (one of them the most exten-



EAGLE AND PHOENIX MILLS.

sive south of Richmond, Virginia), three large machine-shops, three planing-mills, one carriage-factory, one furniture-factory, one sash- and blind-factory, one tub- and spoke-factory, and three brick-yards.

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At the Columbus Boat-Yard steamboats are built and repaired.



GILBERT'S PRINTING ESTABLISHMENT, COLUMBUS.

There are four railroads terminating at Columbus, with their shops, at one of which (the Central) are manufactured superior locomotive-engines and passenger-cars.

Besides its railroad connections in Georgia and Alabama, Columbus carries on an extensive river trade with Eufaula and Fort Gaines, on the Chattahoochee, and with Appalachicola, on the Gulf of Mexico. Columbus receives yearly about seventy-five thousand bales of cotton. This city, in its general appearance, resembles Augusta.

Near it are the pretty suburban villages of Winnton, Linwood, and Bealwood. Just across the river, in Alabama, is the town of Girard. All the religious denominations are represented in Columbus, and some of the church edifices are quite tasty in appearance. The city has an excellent school system, equal to that of any place of its size in the Union. There are five large cotton-warehouses besides the one owned by the Eagle & Phoenix Company and used exclusively for their own storage.



GEORGIA HOME INSURANCE COMPANY'S BUILDING.

The building of the Georgia Home Insurance Company, made entirely of iron, is one of the most imposing in the South. Columbus is an attractive place, and the great manufacturing facilities afforded by its immense water-power are destined at some future day to make it a large and prosperous city. It was laid out in 1828, and when the late war began was a rapidly-growing town. The destruction of its mills towards the close of the war gave it a temporary check, but the city is once more on the road to prosperity, as may be known from the fact that its ruined mills were almost immediately rebuilt, and by Southern capital alone. Where such enterprise is shown, success is sure to follow.

The largest town between Columbus and Macon is Fort Valley, in one of the healthiest and pleasantest localities in Georgia. This place has a population of fourteen hundred, has superior educational advantages, and churches of the leading Protestant denominations. It is a very pretty town, and is situated in a community not surpassed by any in the State for intelligence, refinement, and general morality. Butler, in Taylor County, is a thriving little town. At Talbotton, in Talbot County, about twelve miles from the railroad, is the Collingsworth Institute, a college for young ladies.

On the railroad between Macon and Atlanta are several growing towns. At Forsyth is an excellent collegiate institute for young ladies. Forsyth is the county seat of Monroe. In this county are the Falls of the Towaliga. The river in its descent is divided by a ledge of rock and forms two precipitous falls for a distance of fifty feet.

Barnesville, in Pike County, is a flourishing town of nearly one thousand inhabitants. It has considerable trade, and is connected by a branch railroad with Thomaston, the county seat of Upson, a place of about seven hundred inhabitants.

Griffin, in Spalding County, is a thriving and handsome little city of nearly four thousand inhabitants, surrounded by a prosperous agricultural country. This place enjoys excellent educational and religious advantages, and the society is of the very best. Jonesborough, a thriving town in Clayton County, is noted for being the scene of two desperate battles in the summer of 1864. On the 25th of August of that year, General Sherman, tired of the deadlock around Atlanta, and having resolved to make an attempt to flank Hood out of that city, commenced a movement which ended in placing his army along the line of the Macon Road, near Jonesborough. General Hood,

feeling the necessity of checking this movement, marched out from Atlanta with the corps of Hardee and S. D. Lee, and on the 31st of August assaulted the Federal position, but was at last repulsed. After this repulse, General Hood, thinking no other course was left him, moved back to Atlanta, leaving Hardee with only one corps to hold the works at Jonesborough, while he made preparations to abandon the city and concentrate his army at some point nearer Macon.

On the 1st of September, General Hardee, with his single corps, resisted six corps of the Federal army from noon until dark, and, although his line was at one time pierced and eight of his cannon captured, he succeeded in holding his position until night ended the contest. By this gallant stand General Hardee secured the safe withdrawal of the Confederate army from Atlanta.

The other important towns of this section of Georgia not previously mentioned are Newnan, La Grange, and West Point, on the Atlanta and West Point Railroad. Newnan and La Grange have each a population of two thousand, and West Point numbers about fifteen hundred inhabitants. The schools of La Grange have for many years been highly celebrated. West Point is on both sides of the Chattahoochee. The two parts of the town are united by a bridge five hundred and fifty feet long. It is also connected by rail with the city of Montgomery, in Alabama. Near West Point is a flourishing cotton-factory.

At Newnan, in the summer of 1864, occurred a fierce cavalry battle, in which the Federal General McCook, with a force of five thousand strong, was defeated with great loss.

West Point was also the scene of a gallant but unsuccessful fight in the spring of 1865, in which General R. C.

Tyler, with a small body of citizens, aided by a few troops, vainly attempted to stay the advance of General Wilson's large body of cavalry.

All this section of country suffered heavily by the war, but the people have labored zealously to repair their losses, and already there are to be seen the evidences of increasing prosperity.

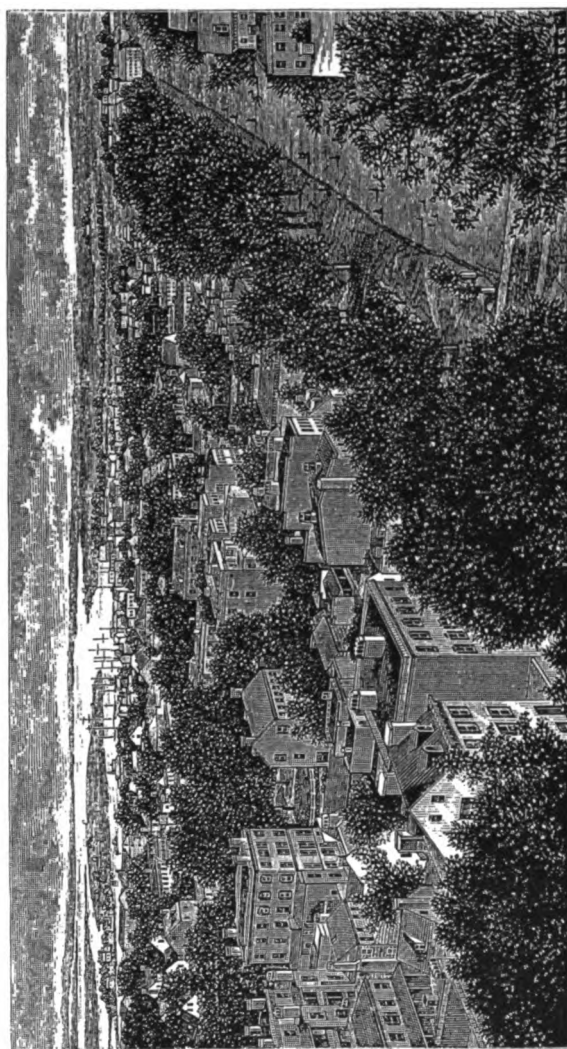
CHAPTER VI.

Savannah and the Georgia Coast—Incidents connected with Colonial and Revolutionary History—Fort McAllister.

SAVANNAH is like no other city in the Union. Few cities are more attractive, and the oftener one visits the place the better will he like it. With its many beautiful little parks and neat residences, it has an air of elegant comfort and refinement, of peace and quiet, well calculated to charm the stranger and make him feel, "surely this must be a delightful retreat from the din and confusion of larger and more bustling cities."

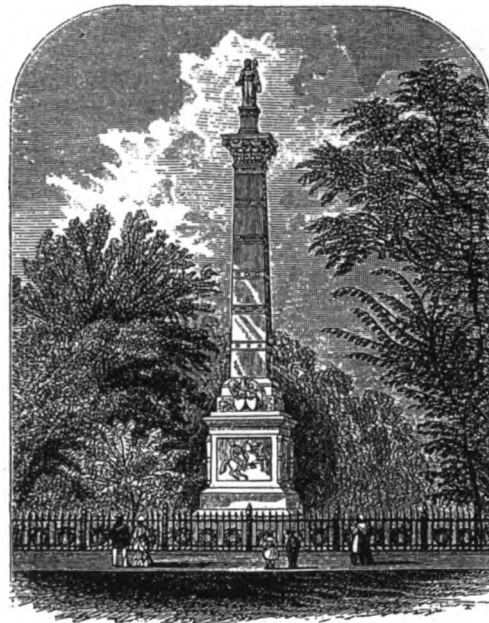
The favorite promenade of the citizens is out Bull Street to Forsyth Park. Starting from the Pulaski Hotel, one passes through five little parks or squares, each adorned with either a monument, a fountain, or a mound. In Johnston Square, facing on one side the Pulaski House and on the other the Scriven House, stands a neat marble obelisk to the memory of General Nathaniel Greene. In Monterey Square stands another and very elegant monument in honor of Count Pulaski, who gave up his life in defence of American liberty on the 9th of October, 1779, when the combined French and American armies made their desperate assault upon the British fortifications at Savannah in a gallant but fruitless effort to rescue the city from the grasp of the invader.

Forsyth Park, with its beautiful fountain, its shell walks bordering grassy lawns and shaded by trees, whose foliage is ever green, thronged on pleasant afternoons by troops



VIEW OF SAVANNAH, LOOKING NORTHEAST FROM PRESBYTERIAN CHURCH-STEEPLE.

of frolicsome children, is a delightful resort. In the new portion of the park stands a noble Confederate monu-



PULASKI MONUMENT.

ment, a most beautiful tribute to the valiant and heroic dead.

The promenade up Bull Street is not the only delightful walk in Savannah. Most of the streets leading out from Bay are adorned with handsome residences and pretty parks. There are twenty-four of these little parks or squares in Savannah, and they constitute the favorite play-grounds for the children. Savannah has of late years become quite a favorite winter resort for tourists

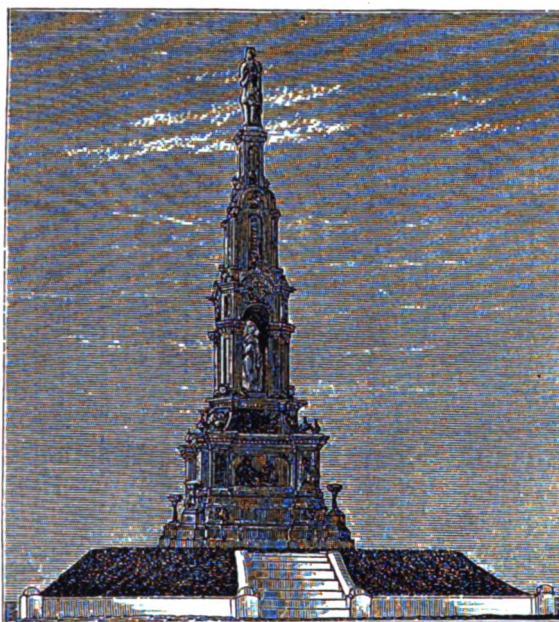
from the North. Many of them prefer it to Florida, and, staying but a short while in the Land of Flowers, return



FOUNTAIN IN FORSYTH PARK.

to the lovely Forest City to spend the remainder of the winter. Some of the parks in Savannah are ornamented with banana-trees, and several of the gardens with orange-trees. Among the flowers the most beautiful is the Camellia Japonica, which here blooms in midwinter in

the open air. But its beauty is not all that Savannah boasts. It is the chief commercial emporium of Georgia, and one of the most important cities of the South. In



CONFEDERATE MONUMENT IN PARK EXTENSION, SAVANNAH.

1860 the population was twenty-two thousand ; by 1870 it had increased to twenty-eight thousand. During the same period its export trade had increased from seventeen million dollars to fifty-eight million dollars. Its yearly receipts of cotton average between six and seven hundred thousand bales. It has railroad communication with all parts of the country, and has an extensive foreign and domestic commerce, ranking as the second cotton port in the United States. In the value of its exports it stands

third in the Union. It has steamship lines to New York, Philadelphia, Baltimore, Boston, Providence, Charleston, Florida, and also to Nassau, in the Bahamas. During the cotton season, steamships from England, Germany, and Spain visit the port and carry off vast loads of the fleecy staple. Besides the steamships the port is crowded with all manner of sailing-vessels from all parts of the world. During the summer vast quantities of melons are shipped here for New York and other Northern markets. The best steamships plying between this city and New York are owned in Savannah, by the Ocean Steamship Company, of which William Wadley is president. It was from Savannah that the first steamship sailed that ever crossed the Atlantic. This steamer was called the "Savannah," and, though built in New York, was owned in Savannah. It made a successful voyage to Liverpool, and afterwards to St. Petersburg, in Russia, and was everywhere an object of great curiosity.

The business streets of Savannah are lined with substantial buildings, some of them imposing in appearance. Among the public buildings of note are the Exchange, Custom-House (built of granite), United States Barracks, Police Barracks, Chatham Academy, and the new hall of the Georgia Historical Society. This latter building is on the corner of Whitaker and Gaston Streets, facing Forsyth Park. Some of the church buildings are models of architectural beauty.

The school system of Savannah is unsurpassed by that of any city in the United States. The literary, educational, and benevolent institutions of the city are numerous and well sustained. The Union Society for the benefit of orphans, and the Female Asylum, are among the oldest institutions in this country, having been founded in 1750. Among other benevolent institutions are the

Abrams' Home for Poor Widows, the Home for Old and Indigent Colored People, the Savannah Poor-House and Hospital, and the Marine Hospital. About nine miles



CUSTOM-HOUSE, ON BAY STREET.

from Savannah, at Bethesda, is the Orphan House, established in the early days of the colony by the Rev. George Whitefield, the companion of those distinguished divines, John and Charles Wesley.

We should not, in mentioning the public buildings of Savannah, fail to notice the market-house, which is one of the handsomest in the Union, and cannot be excelled for comfort and convenience. There are in Savannah two foundries, several planing-mills, one cotton-factory, two large rice-mills, and three grist- and flour-mills. Both the Central and Gulf Railroad companies have extensive machine-shops, at which cars are built. At the Central Railroad shops locomotive engines are also manufactured.

Both of these railroad companies have wharves of their own, down to which their freight-cars run and unload their burdens directly into the ships. On Hutchinson's Island, opposite the city, there is a marine railway, and also a dry-dock.

Savannah is well supplied with suburban retreats. Thunderbolt, Greenwich, White Bluff, Isle of Hope, Montgomery, and Beaulieu are all pleasant places of resort, and are brought within convenient reach of the citizens by lines of railway connecting with the cars of the street railroads.

On Tybee Island, at the mouth of the Savannah River, a new hotel has been erected which adds to the comfort of this favorite summer resort. Between three and four miles from the city is Bonaventure Cemetery, which is reached either by a pleasant drive on the Shell Road or by a few minutes' ride on the Coast-Line Railway. The avenue of great live-oaks, festooned with gray moss, gives to this place an air of solemn grandeur well befitting the final resting-place of the dead. This cemetery derives its name from the original tract of which it formed a part, and which was first settled about the year 1760 by Colonel John Mulryne, an Englishman. By the marriage of his daughter Mary, in 1761, to Josiah Tatnall, of Charleston, it came into possession of the latter family, and here Governor Tatnall, of Georgia, was born, in 1765. This marriage is said to have been the occasion of planting the great oaks which now constitute the chief ornament of the spot. In 1847 the estate passed into the hands of Captain P. Wiltberger, and was by him adapted to its present use.

Nearer the city is Laurel Grove Cemetery, the principal burying-place for the citizens of Savannah. This cemetery contains some handsome monuments and vaults.

About two miles from Savannah is the Jasper Spring, the scene of one of the daring exploits of the heroic Sergeant



AVENUE IN BONAVENTURE CEMETERY.

Jasper, of Revolutionary fame. Here the brave sergeant, assisted by another gallant soldier, Sergeant Newton, rescued from a British guard an American prisoner who was being carried to Savannah for execution. On the same day on which the noble Count Pulaski yielded up his life in the cause of American freedom, Sergeant Jasper received his mortal wound. To Major Horry, who called to see him, as he lay dying, he said (referring to his exploit at the spring), "Should you ever see Jones, his wife

and son, tell them that Jasper is gone, but that the remembrance of that battle which he fought for them brought a secret joy into his heart when it was about to stop its motion forever."

Savannah has always been one of the most patriotic of American cities. She bore her full share of the disasters and glories of the War of Independence, and during the late war between the States her sons were among the foremost to respond to the call of their native State, and ranked among the bravest and the best. Fort Pulaski, on Cockspur Island, was, during the War of Secession, the scene of a brave but vain defence by a Savannah garrison, commanded by Colonel Olmstead. About sixteen miles below Savannah, on the Ogeechee River, stands Fort McAllister, which, during the same great struggle, repulsed several attacks of the Federal fleet. When Sherman appeared before the city in December, 1864, this fort was held by a garrison of only one hundred and fifty men, commanded by Major George W. Anderson. The second division of the Fifteenth Army Corps, consisting of seventeen regiments, under the command of Brigadier-General Hazen, was, on the morning of the 13th of December, ordered to capture the fort. This was done after a sharp fight, in which the assaulting column of nine regiments, numbering between three and four thousand men, suffered a loss of one hundred and thirty-four officers and men killed and wounded, while the total loss of the defenders was forty-eight. The greatest compliment that could be paid the brave garrison is contained in the words of the Federal general who made the assault: "We fought the garrison through the fort to their bomb-proofs, from which they still fought, and only succumbed as each man was individually overpowered."

On the banks of the Ogeechee River are situated some

of the largest rice plantations in Georgia. This is one of the great staples of the State, in the production of which Georgia is second only to South Carolina. According to the census of 1870, the production of rice in Georgia amounted to twenty-two million two hundred and seventy-seven thousand three hundred and eighty pounds. A canal connects the Ogeechee River with Savannah.

At Sunbury, farther down the coast, is an excellent harbor. Here we may see the old Sunbury Fort, and have a fine view of St. Catherine's Sound.

At the mouth of the Altamaha, one of the largest rivers of Georgia, is situated the town of Darien, which carries on a large trade in lumber and timber. Some distance from the town the Atlantic and Gulf Railroad crosses the Altamaha upon a substantial lattice-bridge of four spans, formed upon brick pieces sufficiently high for steamers to pass below. The swamp near by abounds in cypress and oak. The cypress is manufactured into shingles, and shipped to Savannah, Macon, and Northern ports; and large quantities of oak staves are exported to France and Spain. In Darien and vicinity are several large saw-mills.

Brunswick, the capital of Glynn County, situated on the east bank of the Turtle River, is a growing little city of about twenty-five hundred inhabitants. It stands upon a beautiful bluff of white sand, elevated from eight to twelve feet above high water, and extending up and down the river for upwards of two miles. Brunswick is connected by rail with both Savannah and Macon. Along the coast of Glynn County are several islands, of which St. Simon's is the most celebrated. On this island are the ruins of the old town of Frederica, laid out by General Oglethorpe and settled in 1739. It was named in honor of Frederick, Prince of Wales, and only son of George

II. It was laid out with wide streets crossing one another at right angles and planted with rows of orange-trees. This place was the favorite residence of General Oglethorpe, and figures considerably in the early history of Georgia. In 1742 the Spaniards landed on this island a force of about three thousand men. Oglethorpe had only about eight hundred men with whom to oppose the invaders, but by a skilful stratagem he alarmed the Spaniards and caused them to take to their ships. While the enemy were on the island there occurred an engagement between a large body of their troops and a portion of Oglethorpe's regiment, in which the Spaniards were defeated with such slaughter that the scene of the conflict has ever since been known as the "Bloody Marsh."

The most southern town on the coast of Georgia is St. Mary's, beautifully situated on the north side of the river of the same name, nine miles from the ocean. Its harbor is accessible to the largest vessels, and the town has considerable trade. The saw-mills are kept busy all the time, and give to the place quite an air of thrift. In the winter season the town is thronged with Northern visitors, who find comfortable quarters at the Spencer House and at Orange Hall. The latter place is embowered with orange-trees laden in their season with golden fruit, and also with sycamore and wild olive-trees, clad in a foliage of perpetual green. In full view of St. Mary's, on Cumberland Island, is Dungeness, formerly the home of the Revolutionary hero, General Nathaniel Greene. Here repose the remains of "Light-Horse Harry Lee," the gallant commander of Greene's cavalry during the campaigns in the Carolinas, and the father of General Robert E. Lee, the illustrious commander of the Southern armies in Virginia in the war between the States.

CUMBERLAND ISLAND.

99

Cumberland is the most southern of the numerous islands that skirt the Georgia coast. All of these islands produce the celebrated "sea-island cotton," which is so highly valued for its superior quality.

CHAPTER VII.

Southern Georgia—Atlantic and Gulf Railroad and Connections.

ONE of the most important railroads of Georgia is the Atlantic and Gulf, extending from Savannah to Bainbridge, in the extreme southwestern portion of the State. On this road is the finest lumber region of the State. Through this section are many large saw-mills, and the lumber interest, which is constantly increasing in importance, adds greatly to the revenues of the road. The shipments of lumber over the road increased, from 1866 to 1872, from eight million to forty-six million feet. There are several flourishing towns on the road. Blackshear, in Pierce County, eighty-six miles from Savannah, has about one thousand inhabitants. It has good churches and schools. Situated in the great pine belt of Georgia, the climate is delightful for eight months of the year. The citizens claim that it surpasses either Aiken or Eastman as a resort for invalids. Lands can be bought for twenty-five cents per acre within five miles of the town. The largest town on the road between Savannah and Thomasville is Valdosta, the county-seat of Lowndes, a thriving and growing place of nearly two thousand inhabitants. It contains several mills, two good hotels, five white and two negro churches, and has considerable trade, shipping yearly about six thousand bales of cotton. West of Valdosta there is a great natural curiosity, a small river, the Withlacoochee, which enters a cave and disappears. At Ocean Pond and Long Pond (from three to five miles in extent) one may enjoy the best fresh-water fishing in Georgia.

From a small guide to Florida, published in 1874 by Catlin & Lydecker, New York, I have taken the liberty of making the following extract :

“From Valdosta westward to Thomasville the road passes through a region which perhaps offers more inducements to immigration than any other part of Southern Georgia. It is a rolling country, well watered and thickly wooded with yellow pine and other timber. There are many thrifty farmers engaged in planting cotton, corn, and sugar-cane, and in raising stock for the Savannah market. In summer, the southerly winds are cooled in passing over the Gulf of Mexico, and the nights are always pleasant. Cases of malarial disease are rare, and mosquitoes are almost unknown. In short, there is no other part of the Southern country possessing the same advantages of climate, soil, and productions, of health, proximity to schools, churches, and centres of trade, where land can be purchased at as small a price as in this vicinity.”

The next town of importance is Quitman, with a population of about fifteen hundred. This town is the county-seat of Brooks, a fertile county, which contains ten water and six steam saw-mills. In Quitman there are a cotton and wool factory, with a capital of seventy-five thousand dollars, two carriage-manufactories, five churches, thirty stores, mostly of brick, and three large schools, the Lovick Pierce College, Quitman Academy, and the Howard Institute, the latter being for the education of negroes. This town was laid out in 1860. Four miles from the town are some sulphur springs. In this county is a cave called the Devil's Hopper. Near Dixie Station is a large sheet of water called Dry Lake, into which three streams empty and show no outlet again.

At Boston, a flourishing little village, are several steam

saw-mills. This place is the proposed terminus of a railroad to St. Mary's, and another to Greenfield.

Thomasville, two hundred miles from Savannah, the county-seat of Thomas County, is the centre of a thriving trade, and one of the most important towns of Southern Georgia. From this point there were shipped, in 1876, more than twelve thousand bales of cotton. There are in Thomasville five saw-mills, a foundry, and a tannery. There are Methodist, Presbyterian, Baptist, Episcopal, and Roman Catholic churches. Two newspapers are published here, the *Southern Enterprise* and *Thomasville Times*. Here every year the South Georgia Agricultural and Mechanical Association holds its fair, continuing five days. The country around Thomasville is well settled, and cultivated with cotton and sugar. Near the town, a Swiss colony is successfully engaged in the grape-culture. Thomasville is quite a favorite resort for Northern invalids on account of its dry and healthy climate. The streets are wide, and shaded with evergreens. The population numbers between two and three thousand. There are two collegiate institutions, Young Female College, and Fletcher Institute, a high-grade male school.

Whigham, about half-way between Thomasville and Bainbridge, is pleasantly situated on high, rolling ground, and remarkably free from the malarial diseases which infest many localities in the Southern country. A never-failing spring, equal in its character to the water of the hill country, is near the depot, discharging daily ten thousand gallons of pure, cold, freestone water. The land around is well adapted to agricultural purposes, and is unsurpassed as a fruit-growing section. Not far from Whigham is a great natural curiosity, called the "Blowing Cave." Through an opening in the earth, having a diameter of nearly twelve inches, there is always passing

a strong current of air. During the first part of the day the air escapes from the opening, but in the afternoon the direction of the current is reversed, and the air is drawn into the opening with such force as to take in with it a handkerchief, or any light body.

Bainbridge, the chief town of Decatur County, the western terminus of the road, is two hundred and thirty-six miles from Savannah, on the Flint River. This is a growing town of fifteen hundred inhabitants, and contains a cotton-factory, two steam saw-mills, and two newspapers, *The Southern Sun* and *The Argus*. Steamboats make semi-weekly trips to Columbus, Georgia, on the Chattahoochee, and to Appalachicola, Florida, on the Gulf of Mexico. The annual shipments of cotton are eleven thousand bales. The steamers bring here about sixteen thousand bales per annum, to be shipped by rail to Savannah. Bainbridge is also the proposed terminus of a narrow-gauge railroad to Cuthbert and Columbus. On the Albany branch of the Atlantic and Gulf Railroad, which extends from Thomasville to Albany, is Camilla, a new town of about four hundred inhabitants. In this place are several steam saw-mills and two corn-mills. From thence to Albany the road runs near the east bank of the Flint River, passing through some of the largest and most fertile cotton plantations of the State.

Albany is the terminus of four railroads,—the Albany branch of the Atlantic and Gulf, the Brunswick and Albany, the Southwestern from Macon, and a new road to Blakely, in Early County. Albany is the county-seat of Dougherty, and is a prosperous and growing place of twenty-five hundred inhabitants. It boasts a number of mills and foundries, seven churches, two newspapers, and two hotels. From this town were shipped in 1876 thirteen thousand bales of cotton.

On the railroad from Albany to Macon is situated, in Sumter County, the prosperous little city of Americus, having a population of thirty-five hundred, and surrounded by a fertile country. This is a pretty city, with a refined and intelligent population. In Sumter County there are eight grain-mills and four saw-mills.

On a branch of the Southwestern Railroad are the towns of Dawson and Cuthbert, the former having a population of eleven hundred, and the latter of about twenty-five hundred. From Cuthbert there are two short railroads, one to Georgetown, the other to Fort Gaines, each of which places is situated on the Chattahoochee River. Georgetown is opposite the flourishing little city of Eufaula, in Alabama. Twelve miles northwest of Fort Gaines are Pataula Falls. Factories to any extent could be established at these falls.

All this section of country offers to the immigrant, in addition to its soil and climate, every advantage, social, educational, and religious.

CHAPTER VIII.

Education in Georgia.

FROM the earliest history of Georgia her people have been alive to the educational interests of the State.

Previous to the war there was no system of public schools in the State; but they were not needed. Private schools and academies were numerous, and the greater part of the people were able to educate their children, while the instruction of the children of the poor was provided for by appropriations made by the State Legislature. Just before the war, steps were taken for the establishment of a system of public schools. In some of the cities there were flourishing free schools many years before the war.

Immediately after the War of the Revolution the Legislature of Georgia took measures for establishing a State university. In November, 1801, the site of the University of Georgia was selected, and seven hundred acres of land, on which the flourishing city of Athens is now principally located, were sold off in lots for the benefit of the college. The first commencement took place in May, 1804, on the present college campus, under an arbor formed of the branches of trees.

The university has now five departments, thirteen professors, and two hundred students. These are exclusive of the medical department, located at Augusta, having sixty students, and the North Georgia Agricultural College, at Dahlonegah, with nearly two hundred and fifty.

pupils. In the last-named institution tuition is entirely free.

The college proper at Athens (Franklin College) admits "fifty meritorious young men of limited means" without charge, and also young men studying for the ministry of any denomination who stand in need of such aid.

The total value of the property of the university is two hundred and twenty-eight thousand dollars. There are over thirteen thousand volumes in the college library; also about one thousand volumes in the Gilmer Library, bequeathed by Hon. George R. Gilmer, for four years governor of the State. The two literary societies of the college have also fine libraries, each containing over three thousand volumes.

The university has an endowment of one hundred and twenty-eight thousand three hundred and fifty dollars, besides the special endowment of the State College of Agriculture and Mechanic Arts, which has an endowment derived from the sale of the agricultural land scrip, donated to the State by Congress. This donation amounts to two hundred and forty-two thousand two hundred and two dollars. Including this, the total endowment of the university is three hundred and seventy thousand five hundred and fifty-two dollars. The State College of Agriculture and Mechanic Arts has provided for the free education of as many young men, residents of the State, as there are members of the Georgia Legislature. There are three departments of study in this agricultural college, viz., agricultural, engineering, and applied chemistry. There is also a law school at Athens connected with the University.

Mercer University, a college of the Baptist denomination, is located at Macon, Georgia. It was opened for the admission of students in 1838, and until 1870 was

located at the village of Penfield, in Greene County. The present building and grounds cost one hundred and fifty thousand dollars. Two other large buildings are yet to be constructed. The university has an endowment of one hundred and sixty thousand dollars. There are about six thousand volumes in the college library, and about the same number in the libraries of the two literary societies. Besides the regular college course there are connected with this institution a law and a theological school. The number of students at present is about one hundred and thirty-five. Since the establishment of the college, in 1838, about three hundred and ninety have graduated. Connected with the university are Mercer High School, at Penfield, with one hundred and twenty students, and Crawford High School, at Dalton, having one hundred and twenty-five students. Both of these are schools of high order.

Emory College, at Oxford, in Newton County, which is the joint property of the North Georgia, South Georgia, and Florida Conferences of the Methodist Episcopal Church South, was chartered December 29, 1836. The first class graduated in 1841. The college buildings are neat and commodious. This institution has an able faculty. It has a valuable college apparatus, and several thousand volumes in the library. The literary societies have also valuable libraries, containing in all between five and six thousand volumes. There is also a first-class preparatory school connected with the college. The present number of students in the college is one hundred and fifty-six. Up to this time five hundred and ninety have graduated, many of whom hold prominent positions both in church and state. Vigorous efforts are being made to give to this college an endowment worthy of its past and present services in the cause of education and religion.

The Wesleyan Female College, at Macon, claims for itself the honor of being the first female college in the world. It is the property of the Methodist denomination. It is well supplied with all the necessary buildings and apparatus. It has a president and seven professors, besides several other teachers and assistants. It has in the college and preparatory classes two hundred and four students, and is undoubtedly one of the finest institutions in the Union. It was chartered December 10, 1836. The college was built by general subscription,—Methodist ministers acting as agents for the collection of necessary funds. In 1845 a mortgage of ten thousand dollars against the college was paid off by James A. Everett, of Houston County, who presented the college to the Georgia Conference of the Methodist Episcopal Church South. The first class graduated in 1840, since which time the degree of A.B. has been conferred on six hundred and seventy-eight, and that of A.M. on four hundred and two of its graduates.

The Southern Masonic Female College, at Covington, was first erected for a female school of high grade by the citizens of the place in 1851. It became the property of the Grand Lodge of the Masonic fraternity in Georgia, in 1852, and was procured for the purpose of educating the female orphans of Masons. It has about ninety students, and has graduated up to this time three hundred and fifty.

The Pio Nono College, located at Macon, is a Catholic institution, established mainly by the efforts of Right Rev. William H. Gross, Bishop of Savannah. The college building is of brick, and cost fifty thousand dollars. During the term ending June, 1876, there were eighty-six scholars.

The Atlanta University, for the education of negroes

in Georgia and the adjoining States, was established by the Freedmen's Bureau and various Northern aid societies, the chief of which was the American Missionary Association.

The Georgia Legislature donates to this institution eight thousand dollars per annum. During the last year there were in attendance two hundred and forty pupils.

In addition to the colleges already mentioned there are in Georgia the following institutions of learning, viz. : Rome Female College, at Rome ; Cherokee Baptist Female College, at Rome ; Houston Female College, at Perry ; Martin Institute, at Jefferson ; Conyers Female College, at Conyers ; Collingsworth Institute ; also the Levert Female College, at Talbotton ; Young Female College, at Thomasville ; Southern Female College, at La Grange ; La Grange Female College, at La Grange ; West Point Female College, at West Point ; Dalton Female College, at Dalton.

The Georgia Academy for the Blind, at Macon, was opened in July, 1851. Since then one hundred and forty-five pupils have been admitted. The Georgia Institute for the Education of the Deaf and Dumb was founded at Cave Spring, not far from Rome, in May, 1846. The whole number of pupils received up to this time is two hundred and fifty-three. Both of these last-named institutions are in a flourishing condition.

In regard to the common schools of Georgia, we cannot do better than to give the following extract from the message of Governor Smith to the Legislature in January, 1877 :

"A brief *résumé* of the history of popular education since my entry on the duties of the executive office, may not be out of place in this, my last annual communication to the general assembly. Our system of common schools,

although organized at an earlier day, did not really go into effect until the year 1873. We had a common school commissioner, and a tax for the support of schools had been levied and collected. Schools had been put into operation in some of the counties, and teachers employed; but at the close of the year 1871 there existed a school debt in various counties of the State amounting to more than three hundred thousand dollars. This debt was due to school officers and teachers, for services rendered by them to that date. The school fund, which amounted October 1, 1871, to \$327,083.09, had been, in violation of the Constitution of the State, diverted from its lawful object, and appropriated to the payment of legislative and other expenses of the government. While teachers and school officers clamored for their pay, there was nothing to the credit of the school fund in the treasury. Almost universal distrust of the system itself prevailed, and it was feared that it had received a fatal blow in the very first years of its existence.

“From the lack of means to pay the teachers, no schools were taught in the year 1872, and the commissioner devoted his attention to systematizing the work under the law passed in August that year. Not only the accumulated debts had to be paid, but it was also necessary to raise funds to revive and re-establish schools. The legislature of 1872 provided that a tax should be levied to raise money to pay the claims of teachers and school officials. Under the operation of this law one hundred and seventy-four thousand dollars was raised and paid to claimants, and by other legislation, since adopted, these local debts have been almost entirely extinguished. In the year 1873 schools were again put in operation, and have increased in number until every county of the State has its school organization. Means for the support of schools

are regularly and punctually supplied, and no well-founded claim upon the school fund, in any county in the State, remains unsatisfied.

“While these facts are most gratifying, the increased interest and confidence in the system are forcibly exhibited by the following figures, taken from the Commissioner’s Report :

School attendance in 1871 was, whites	42,914
“ “ “ colored	6,664
Total	49,578
The attendance in 1873 was, whites	63,922
“ “ “ colored	19,755
Total	83,677
Attendance in 1874 was, whites	93,167
“ “ “ colored	42,374
Total	145,541
Attendance in 1875 was, whites	105,990
“ “ “ colored	50,359
Total	156,349
Attendance in 1876 was, whites	121,418
“ “ “ colored	57,987
Total	179,405
Increase of attendance over that of 1875	23,011

“The amount of money raised for the support of the school system, since my induction to office, is as follows :

Am’t raised under Act of 1872, for paym’t of school debts	
of 1871	\$174,000
Amount apportioned for support of schools in 1873	250,000
“ “ “ “ “ “ “ 1874	265,000
Am’t apportion’d and p’d for “ “ “ “ 1875	291,319
“ “ “ “ “ “ “ 1876	291,319
Total	\$1,271,638

"It is but due to certain communities in this State to add that, with a public spirit most praiseworthy, the above sum has been supplemented by annual local city and county appropriations, to the amount of between one hundred and forty thousand and one hundred and fifty thousand dollars."

During the year just closed, Professor Orr, the State School Commissioner, reports the attendance on the public schools to be in round numbers two hundred thousand.

CHAPTER IX.

Religious Denominations in Georgia.

WHEN Oglethorpe and the first settlers, on the 1st of February, 1733, landed at the bluff where now stands the city of Savannah, they were accompanied by Dr. Henry Herbert, an Episcopal clergyman. In March, 1734, a body of Salzburgers (Lutherans), from Germany, landed at Savannah. They settled at Ebenezer, in Effingham County, and there built the first Lutheran church in Georgia. The first pastor of this church was the Rev. John Martin Bolzius.

Rev. Henry Herbert, at Savannah, was followed by Rev. Samuel Quincy, who was followed by John Wesley, in 1736, and George Whitefield, in 1738. Charles Wesley accompanied his brother John to Georgia. The two Wesleys and Whitefield are renowned as the founders of the powerful and influential body of Christians known as Methodists. In 1755 the trustees surrendered the control of the colony to the crown, and the Church of England (Episcopal) became the established church. Parishes were formed, in three of which were churches, one in Savannah, one in Augusta, and one in Burke County, then known as the Parish of St. George. Outside of Savannah the churches were supplied with missionaries sent out by the Society for the Propagation of the Gospel in Foreign Parts. When the Revolution broke out, the field was entirely abandoned by the Church of England, and for nearly twenty years after its close there seems to have been no organized Episcopal church in Georgia.

The first bishop of this church who visited Georgia was Bishop Dehon, of South Carolina, who came, in 1815, to consecrate the new building for Christ Church, in Savannah, where he confirmed a class of sixty. This was the first confirmation ever held in Georgia. In 1840 the Rev. Stephen Elliott was elected the first bishop of the diocese, which office he held until his death, in 1866. He was succeeded by Rev. John W. Beckwith, the present bishop, in 1867.

The Lutheran Church, of which we have already made mention, had three churches in 1786,—one at Ebenezer, one at Goshen, and one in Savannah.

As early as 1735 a colony of Scotch Presbyterians settled at New Inverness, now Darien, in McIntosh County, at the mouth of the Altamaha River. Their pastor was Rev. John McLeod. The Independent Presbyterian Church of Savannah was organized about the year 1765. The first Presbytery was held in Wilkes County, at Liberty Church, March 16, 1797. The names of the ministers constituting it were John Newton, John Springer, Robert M. Cunningham, Moses Waddell, and William Montgomery. The Synod of Georgia now embraces five Presbyteries, extending all over the State.

We have already mentioned that John Wesley, the founder of Methodism, came to Georgia, accompanied by his brother Charles, as early as 1736, and that he was followed by George Whitefield in 1738. This may properly be regarded as the introduction of Methodism into America, though the church of that name was not formally established on the Western Continent until many years afterwards. Mr. Wesley was himself in the habit of referring to this as the "second rise of Methodism." Georgia, in her infancy, had the ministry of John and

Charles Wesley, Benjamin Ingham, George Whitefield, Delamotte and Cornelius Winter, men whose names are familiar as instruments in the establishment of Methodism. The Methodist Church in America was organized in Baltimore, in 1784, on account of the separation of the colonies from Great Britain. Mr. Wesley, acting in accordance with his views of church polity, decided to ordain Dr. Thomas Coke as bishop, who came to America and set apart Rev. Francis Asbury as superintendent or bishop of the Methodist societies in this country. In 1785 Methodist ministers entered Georgia at Augusta, coming from North Carolina and Virginia, and soon after Georgia was included in the South Carolina Conference. The first circuit extended from Savannah to Wilkes County. Conspicuous among the pioneer preachers of Methodism were James Foster, Thomas Humphries, and John Major. Among the early active ministers of this denomination in Georgia were Hope Hull, John Garvin, Stith Mead, and Levi Garretson. As early as 1805 the now venerable Dr. Lovick Pierce was an active travelling preacher in Georgia. In 1830 the Georgia Conference was formed, and in 1866 this was divided into the North Georgia Conference and the South Georgia Conference.

The first Baptist in Georgia, of whom there is any account, was Nicholas Begewood, in 1757. This gentleman was an agent of Whitefield's Orphan House, near Savannah. The first Baptist church organized in Georgia was in 1772, at Kiokee Meeting-House, where Appling, in Columbia County, now stands, under the ministry of Rev. Daniel Marshall, at that time the only ordained Baptist minister in Georgia. The Baptist Convention of the State was organized in 1822, at Powelton, Hancock County. Rev. Jesse Mercer was moderator of the first meeting of the convention. Other prominent ministers

of this denomination of the early period were Edmund Bottsford and Silas Mercer.

In addition to the above-mentioned Protestant denominations, there is another whose members, like the Baptists, hold to immersion as the only method of Christian baptism, but who refuse to be called by any other name than that of Christians. One of the founders of this sect was the pious and learned Alexander Campbell, of Kentucky. As this denomination has no synod in Georgia, we have not been able to learn its statistics in full, nor do we know when or by whom it was first introduced into Georgia.

The first Catholic church established in Georgia was at Locust Grove, in Taliaferro County, seven miles from Crawfordville, by a colony of Catholics from Maryland, in 1794. Soon after, a number of Catholics, who were refugees from the terrible massacres of St. Domingo, settled in Savannah and Augusta, and a priest, who came with them, went to Locust Grove, and was the first Catholic clergyman that ever officiated in Georgia. Georgia and the two Carolinas were subject to the see of Baltimore until July 11, 1820, when they were raised to a distinct diocese by the appointment of Dr. John England, who was the first bishop of Charleston, with these three States as his field of operations. There was then but one church in Georgia, the one in Augusta,—those at Locust Grove and Savannah being without pastors. Georgia was made a distinct diocese November 10, 1850, and Rev. Dr. Gartland was appointed the first bishop of Savannah. He was succeeded, after his death, by Bishops Barry, Verot, and Persico. The present bishop, Rev. William H. Gross, was appointed on April 27, 1873.

The following statistical table of the different Chris-

tian denominations in Georgia will prove interesting and instructive :

BAPTIST CHURCH.

Church Buildings.	Membership.			Sunday-Schools.	Sunday-School Scholars.	Educational Institutions.
	White.	Colored.	Total.			
2300	112,662	81,000	193,662	702	31,389	1 College and 3 High Schools.

METHODIST CHURCH.

Methodist Episcopal Church South.	Church Buildings.	Preachers.		Members.	Sunday-Schools.	Sunday-School Scholars.	Educational Institutions.
		Itinerant.	Local.				
North Georgia Conference.....	643	168	425	53,754	527	27,171	6 Colleges and 2 Orphan Homes
South Georgia Conference.....	406	123	221	29,304	about 240	12,332	
Total.....	1049	291	646	83,058	767	39,503	
Colored M. E. Ch'ch of America.....	*	*	*		*	*	
Set off from the M. E. Church South.....				13,752			
M. E. Church North	193	101	294	†15,000	194	8,378	1 College and 6 Schools.
African M. E. Ch'ch	*	*	*	40,253	*	*	
Protestant Method't Church.....	*	*	*	2,500	*	*	
Total.....	1242	392	940	154,463	961	47,881	

* Not ascertained.

† Twelve thousand of these members are colored.

PRESBYTERIAN CHURCH.

Church Buildings.	Sittings.	Preachers.	Members.			Sunday-Schools.	Sunday-School Scholars.
			White.	Colored.	Total.		
146	56,000	86	8403	1000	9403	88	5085

PROTESTANT EPISCOPAL CHURCH.

Churches and Stations.	Sittings.	Clergymen.	Members.	Sunday-Schools.	Sunday-School Scholars.
29	11,000	39	4500	25	2613

THE CHRISTIAN CHURCH.*

Church Buildings.	Sittings.	Preachers.	Members.
50	20,000	40	5000

CATHOLIC CHURCH.

Churches.	Chapels.	Priests.	Convents.	Orphan Asylums.	Members.	Colleges.
25	35	24	6	3	about 25,000	1

LUTHERANS.

Church Organizations.	Church Buildings.	Sittings.
11	10	3000

CONGREGATIONALISTS.

Churches.	Sittings.
10	2800

UNIVERSALISTS.

Church Organizations.	Church Edifices.	Sittings.
5	3	900

* This Church in Kentucky and the West is often called Campbellite, though its members repudiate the name.

Besides the different Christian denominations in Georgia, there are 2620 Israelites, and only three Hebrew ministers.

The Catholic Church includes all its people in the census of its members; Protestant denominations only their communicants. Counting the Protestant population of Georgia in the same way in which the Catholics estimate their membership, we would have in round numbers, of

Baptists	.	.	.	.	.	.	570,000 members.
Methodists	.	.	.	.	.	.	450,000 "
Presbyterians	.	.	.	.	.	.	28,000 "
Episcopallians	.	.	.	.	.	.	13,000 "
Christian	.	.	.	.	.	.	15,000 "
Total Protestants	.	.	.	.	.	.	1,076,000 "

This would leave still a large number claiming no particular denomination as their own.

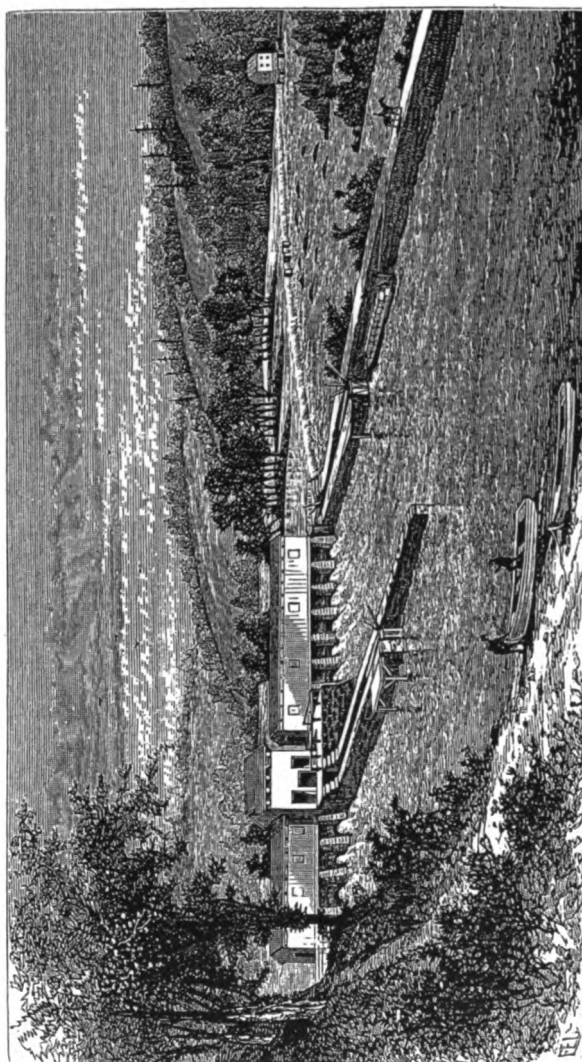
CHAPTER X.

Water-Power of Georgia.

No State in the Union has superior water-power to Georgia. The State is well supplied with rivers and innumerable smaller water-courses. The Savannah, Ogeechee, Altamaha, Satilla, and St. Mary's, which flow into the Atlantic Ocean, are all navigable for steamboats and vessels of light draught for distances of from one hundred to four hundred miles. The Oconee and Ocmulgee, which by their junction form the Altamaha, are each navigable for two hundred miles or more. The Flint and Chattahoochee, on the western side of the State, unite in the southwest and form the Appalachicola, which flows through Florida into the Gulf of Mexico. Each of these rivers is navigable for two hundred miles. The Etowah and Oostenaula, in the northwestern portion of the State, unite at the thriving city of Rome and form the Coosa, which flows westward into Alabama and forms one of the chief branches of the Alabama River. Steamboats can ascend the Coosa as far as Rome. The cities which have been most energetic in using the fine water-power in their vicinity are Augusta and Columbus. The Chattahoochee River, from the top of Clapp's Dam to the boat-landing at Columbus, has about thirty thousand horse-powers, even at low water. Above this point to Harris County there are probably twelve thousand horse-powers. Besides the Chattahoochee River, there are in Muscogee County several small streams which can be

used to advantage for running light machinery requiring not more than eighteen horse-power. The available horse-power of this county is estimated at between forty thousand and fifty thousand. The people of Columbus have not been slow to improve the great natural advantages offered them by the magnificent water-power which they possess, as may be seen by referring to the chapter on Macon and Columbus. The city of Augusta, in Richmond County, on the other side of the State and to the northeast of Columbus, is furnished by its canal with a magnificent water-power, which the citizens confidently believe will at some future day make their city the Lowell of the South. The following sketch of the canal is taken from a pamphlet published, in 1875, under the direction of the Board of Managers:

"The Augusta Canal was projected by a few public-spirited citizens of Augusta, prominent among whom may be mentioned the late Colonel H. H. Cumming, the late W. M. D'Antignac, and the Hon. John P. King. These gentlemen, with six others, were elected by the City Council of Augusta a Board of Commissioners for the purpose of constructing a canal from a point in the Savannah River, about seven miles above, to the city of Augusta, for manufacturing purposes and for the better securing an abundant supply of water to the city. The work was commenced in 1845 and completed in the early part of 1847. The dimensions were forty feet surface width, twenty feet bottom, and five feet deep, affording a total mechanical effect of about six hundred horse-powers. It soon became evident that the canal was too small to supply the demand for power, and the increasing demand for fire, domestic, and other purposes consequent upon the growth of the city. Temporary expedients were devised and carried into effect from time to time in order



BULKHEAD, LOCKS, AND DAM OF AUGUSTA CANAL.

to increase the supply, and after the banks of the canal had been raised so as to furnish seven feet depth of water, its ultimate capacity was reached, and yet the quantity furnished was entirely inadequate to supply the demand. Under these circumstances the enlargement of the canal to its present dimensions was decided upon, and in March, 1872, the work was commenced, and is now completed. Its dimensions and capacity are as follows: Length of main canal, or *first level*, seven miles; and including *second* and *third levels*, nine miles. Minimum water-way, one hundred and fifty feet at surface, one hundred and six feet at bottom, and eleven feet deep, making an area of cross-section of fourteen hundred and eight square feet. The bulkhead, locks, dam, and other structures are composed of stone-masonry formed of granite rock laid up in hydraulic cement mortar, and are of the most substantial character. The area of openings for the supply of the canal amounts to fourteen hundred and sixty-three square feet, and the entire waters of the Savannah River are made available for maintaining the supply. There are about two hundred and seventy-five acres of reservoirs, exclusive of the canal proper and the pond above the bulkhead dam. There is a bottom grade or descent in the main canal of one hundredth of a foot in one hundred feet, giving a theoretical mean velocity of $2\frac{74}{100}$ feet per second, or a mechanical effect under the minimum fall, between the *first* and *third levels*, or between the first level and the Savannah River below Rae's Creek, of upwards of fourteen thousand horse-powers, not including available supply from the surface of the reservoirs. Of this immense power but nineteen hundred horse-powers are contracted for, leaving at least twelve thousand horse-powers to be disposed of. . . . The company propose to lease water only from the *first*

level to Hawk's Gully and the river. On the *first level* the company own a distance of nearly a mile. This tract has been divided into two tiers of water lots, most eligibly located for using water. Parallel with the canal, and adjacent thereto, is a street seventy feet wide, including the towing-path of the canal. Four hundred feet from this it is proposed to lay out another street parallel thereto, between which and the river there will be a tier of lots, upon which water can be used and discharged with very little cost directly into the river. The company also own on the opposite side of the canal a tract of land extending from the Washington Road nearly to Rae's Creek, containing ninety acres, exceedingly well located for the erection of dwellings for the use of operatives. This land will be sold to lessees of water-power at very low rates."

By an examination of the table at the end of this chapter, containing a partial list of water-powers in Georgia, it will be seen that very many of the counties of Georgia, besides Muscogee and Richmond, are blessed with a splendid water-power.

In 1872 the Legislature of Georgia passed an act to encourage the manufacture of cotton and woollen fabrics in the State of Georgia; by which act it was declared that "Any mill or mills within said State for the manufacture of fabrics out of cotton or wool, or both, whether such investment be applied in the establishment of a new factory, or in the extension or enlargement of a now-existing factory, shall be exempt from taxation for State, county, and municipal purposes on the capital so invested, and on any property purchased or erected therewith, intended for and necessary to such manufacture, for the term of ten years from and after the laying of the foundation of the mills so to be erected."

The annexed "Partial List of Water-Powers in Georgia" was prepared by Dr. George Little, the State Geologist, for the "Hand-Book of Georgia," published under the auspices of Dr. Thomas P. Janes, the State Commissioner of Agriculture.

A Partial List of the Water-Powers in Georgia, with Descriptions, Arranged by Counties.

NAME OF STREAM.	POINT OF SECTION.	Cubic feet per sec.	Theoretical horse-power of one-foot head.	Available horse-power of one-foot head.	Approximate head or of 10 feet.	Theoretical power of stream with this head running 24 hours.	Available power of stream with this head working 24 hours of each day.	Condition of stream.	By whom surveyed.	REMARKS.
BANKS COUNTY.										
Broad River.....	Habersham Line	27.20	3.10	2.48	10.00	31.00	24.80	Low water or more.	Barrow and Locke	
Grove River.....	Homer and Mt. Airy Road.....	65.60	7.41	5.99	10.00	74.10	59.90	" "	Locke.	
Hudson River.....	Homer and Mt. Airy Road.....	77.40	8.58	6.86	10.00	85.81	68.61	" "	"	
BARTOW COUNTY.										
Oothcaloga Creek.....	Gordon Line.....	15.00	1.70	1.36	6.00	10.20	8.16	Minimum low water.	"	Water very low.
" "	Adairville.....	7.00	.79	.63	6.00	5.36	4.27	" "	"	" "
Lewis Spring.....	Near Adairville.	8.00	.80	.64	10.00	9.12	7.30	" "	"	Water very low: largest spring in county.
Cedar Spring.....	Martello's Mill.....	2.50	.28	.22	18.00	5.10	4.00	" "	"	Water very low.
Cedar Creek.....	Gordon Line.....	8.00	.80	.64	12.00	11.00	8.00	" "	"	" "
Fork of Pine Log.....	McCanless and Parrott Mill.....	18.00	2.04	1.63	20.00	41.00	32.80	" "	"	" "
" "	Johnson's Mill.....	14.00	1.60	1.28	15.00	24.00	19.20	" "	"	Estimated.
Silacoa Creek.....	Gordon Line.....	20.00	2.27	1.81	20.00	45.60	36.50	" "	"	Very low.
Stamp Creek.....	Pool's Furnace.....	12.00	1.34	1.07	20.00	27.30	22.00	" "	"	" "
" "	At mouth.....	24.00	2.68	2.14	20.00	54.40	43.70	" "	"	" "

		4.00	.45	.36	20.00	9.20	7.30	Minimum low water.	Locke.	
Boston's Creek.....	At mouth.....									
Rogers's Creek.....	" " " " " "	7.00	.79	.63	20.00	16.00	13.00	Low water.	"	Very low; very rapid fall.
Etowah River.....	At mouth of Al- latoona.....	1397.70	147.68	118.14	15.00	2250.00	1835.00	Minimum low water.	"	
Pettis Creek.....	Mouth.....	20.00	2.67	2.13	5.00	12.00	9.60	"	"	
Nancy Creek.....	" " " " " "	6.00	.68		5.00	3.00		"	"	
Two-Kun Creek.....	Kingston.....	26.00	2.94	2.30	10.00	10.00	38.40	Low water.	"	Very low.
Conasaena Creek.....	" " " " " "	5.00	.33	.44	20.00	11.00	8.10	"	"	
Bartley's Creek.....	Near mouth.....	5.00	.33	.44	18.00	10.00	8.20	"	"	
Allatoona Creek.....	2 1/2 miles from mouth.....	25.50	28.50	22.80	17.00	48.40	38.80	"	"	
Pumpkinvine Creek.....	2 miles from mouth.....	70.00	7.95	6.41	10.00	80.00	64.00	"	"	
Raccoon Creek.....	1 mile from mouth.....	39.00	4.54	3.63	10.00	45.60	36.50	"	"	
Euharlee.....	2 miles from mouth.....	120.90	13.51	10.81	12.00	165.60	132.80	"	"	
Bras Coun Y.....	Holt's Shoals.....	2017.00	331.27	265.09	3.70	1224.70	979.76	"	"	Estimated.
Ocmulgee River.....	Macon.....	5.00	.57	.43	10.00	5.70	4.50	"	"	"
Walnut Creek.....	" " " " " "	8.00	.97	.73	12.00	10.92	8.50	"	"	
Swift Creek.....	7 miles, Macon.....	70.00	7.96	6.36	20.00	159.60	127.68	Above "	"	
Stone Creek.....	Freeman's Mill.....									
Tobacco Creek.....	Waynesborough Railroad.....	50.00	5.70	4.56	10.00	570.00	456.00	Barrow.	"	Low flat banks.
Buxas County.....	Shell Bluff.....	70.00	1.14	.91	10.00	11.40	9.10	"	"	
McBean's Creek.....	Sapp's Mill.....	20.00	2.28	1.82	11.00	25.08	20.08	"	"	
Boggy Gut Creek.....	1 1/2 miles south of Carrollton.....	6.00	.68	.54	10.00	6.80	5.40	Locke.	"	
Sapp's Spring Creek.....	3 miles, Carroll- ton.....	5.00	.56	.44	10.00	5.60	4.40	"	"	
Carroll County.....	4 1/2 miles, Car- rollton.....	4.00	.45	.36	10.00	4.50	3.60	"	"	
Buffalo Creek.....	1 mile above mouth.....	18.00	2.04	1.64	10.00	20.40	16.40	"	"	Estimated.

A Partial List of the Water-Powers in Georgia, etc.—(Continued.)

NAME OF STREAM.	POINT OF SECTION.	Cubic feet per sec.	Theoretical horse-power of one-foot head.	Available horse-power of one-foot head.	Approximate head or of 10 feet.	Theoretical power of stream with this head running 24 hours.	Available power of stream with this head working 24 hours of each day.	Condition of stream.	By whom surveyed.	REMARKS.
CARROLL CO.—Cont.										
Snake Creek.....	Factory.....	42.00	4.70	3.76	30.00	141.00	112.80	Low spring.	Locke.	100 or more feet of head can be had.
Dog River.....	Above Watkins's Mill.....	25.76	2.92	1.60	10.00	20.20	16.00	"	"	Measurement unsatisfactory.
Cockrum's Creek.....	Old Cherokee and Carroll Line.....	4.50	.60	.48	10.00	6.00	4.80	"	"	Estimated.
Tallapoosa.....	Above mouth of Buck Creek.....	101.43	17.42	9.13	10.00	114.20	91.30	"	"	
Buck Creek.....	South of Tallapoosa and near Bonner's.....	16.60	1.81	1.45	10.00	18.10	14.50	"	"	
Indian Creek.....	Dorris Mill.....	7.00	.79	.64	10.00	7.91	6.40	"	"	Estimated.
Whooping Creek.....		24.50	2.72	2.17	10.00	27.20	21.70	" Flush or less.	"	
CHATTAHOOCHEE CO.										
Oswichee Creek.....	Bagley's Mill.....	6.00	0.70	0.56	18.00	12.60	10.08	Low spring.	"	
"	Romney's Mill.....	21.00	2.28	1.82	18.00	33.04	24.43	"	"	
Woolfolk's Branch.....	Woolfolk's.....	1.00	0.11	0.08	65.00	7.15	5.72	"	"	
Upatoi.....					12.00					
CHATTOOGA COUNTY.										
Little Turtle Creek.....	Near mouth.....	5.50	0.62	0.49	10.00	6.20	4.90		Barrow.	Very sandy and full.

Locality	Lot 30	4.50	0.51	0.40	10.00	5.10	4.00	Barrow.
Raccoon Creek.....	Mouth.....	8.80	1.00	3.78	10.00	10.00	8.00	"
Armuchee Creek.....	Subligna.....	41.50	4.73	3.78	10.00	4.73	3.78	"
CHEROKEE COUNTY.								
Mill Creek.....	Mouth at Canton	46.00	5.22	4.17	10.00	52.20	41.70	Low spring or more.
CLAY COUNTY.								
Chemochochee.....	Weaver's Mill.....	60.00	6.84	5.47	30.00	205.20	164.16	
Patula.....	Rapids.....	240.00	27.36	21.88	22.00	601.92	481.53	
CLINCH COUNTY.								
Swanace River.....	Mixon's Ferry.....	72.00	7.95	6.38	10.00	79.50	63.80	Locke. Col. Rob- inson, R. M. Co.
COBB COUNTY.	Empire Mill.....	147.00	16.76	13.4	16.00	268.10	214.52	Low water.
Big or Vickery's Creek								
" " " "	Rosewell Manu- facturing Co.....	147.00	16.76	13.40	30.00	502.80	402.24	" "
" " " "	Lebanon Mills.....	147.00	16.76	13.40	14.00	234.60	187.7	" "
Head of Nickajack.....	Jones's Mills.....	3.00	0.34	0.27	15.00	5.10	4.58	Locke.
Nickajack.....	Ruff's Mills.....				29.00			"
" " " "	Concord Factory				21.00			"
" " " "	Concord Factory and Ruff's Mill combined.....							"
Chattahoochee.....	Austell's Shoals.....	2000.00	226.20	180.96	50.00	2262.00	189.60	"
Tributary Sweet Water.....	Babb's Mill.....	2.00	0.23	0.18	18.00	4.14	3.32	"
Rotten Wood.....	Aker's Mill.....	35.00	3.97	3.17	32.00	127.24	100.78	"
" " " "	Boring's Mill.....	38.00	4.30	3.44	10.00	43.00	34.40	"
Soap Creek.....	At Paper Mill.....	62.00	7.40	5.92	67.00	493.80	396.64	"
Little Willco.....	Old Starch Fac- tory.....	5.00	.57	.45	20.00	11.40	9.00	"
" " " "	At mouth, Will- co Factory.....	8.00	.91	.72	30.00	27.00	21.60	"
Willco.....	Above Factory.....	21.60	2.45	1.96	31.00	75.95	60.72	"
Powder Spring.....	Powder Spring.....	30.00	3.96	3.17	10.00	39.60	31.70	"
Swet Water.....	Hays's Bridge.....	80.50	9.00	7.20	10.00	90.00	72.00	"

A Partial List of the Water-Powers in Georgia, etc.—(Continued.)

NAME OF STREAM.	POINT OF SECTION.	Cubic feet per sec.	Theoretical horse-power of one-foot head.	Available horse-power of one-foot head.	Approximate head or of 10 feet.	Theoretical power of stream with this head running 24 hours.	Available power of stream with this head working 24 hours of each day.	Condition of stream.	By whom surveyed.	REMARKS.
COLUMBIA COUNTY.										
Kiokee Creek.....	Near Appling....	30.00	3.42	2.73	10.00	34.80	27.30	.....	Barrow.	
DAWSON COUNTY.										
Etowah River.....	Palmer's Mill.....	60.95	6.87	5.29	10.00	48.70	29.90	.....	"
Shoal Creek.....	Howzer's Mill.....	33.00	3.76	2.86	16.00	60.16	48.12	.....	"
Amicolala River.....	Dawsonville and Jasper Road.....	103.60	11.80	9.44	51.00	590.00	472.00	.....	"
"	8 miles, Dawsonville.....	85.00	9.69	7.75	10.00	96.96	77.50	.....	"
Head of Jones's Creek	Foster's Mill.....	2.00	0.23	0.18	14.00	3.19	2.55	.....	"
DECATUR COUNTY.	Limesink.....	2.00	0.23	0.18	105.00	24.15	19.32	Low spring.	Locke.	Creek disappears probably has more water. Flow affected by mills above. Estimated.
Barnet's Creek.....	Lot 367.....	23.00	2.62	2.09	10.00	26.30	20.90	"	"	
Attapulgus Creek.....	Thomasville Rd.	18.00	2.05	1.64	10.00	20.50	16.40	"	"	
Martin's Mill Creek.	"	5.00	0.57	0.45	7.00	3.99	3.19	"	"	
Sanburn's Mill Ck....	Attapulgus Rd....	8.00	0.91	0.72	10.00	9.10	7.20	"	"	
DE KALA COUNTY.										
Peachtree Creek.....	Houston's Mill....	23.75	2.71	2.16	22.00	.....	.....	Low water.	"	
EARLY COUNTY.										
Harrod's Creek.....	Early Factory....	20.00	2.28	1.82	35.00	79.80	63.84	Low spring.	"	
Colomochee Creek....	Early Road.....	70.00	7.98	6.38	12.00	95.76	76.60	.....	"	Estimated.

[illegible]

A Partial List of the Water-Powers in Georgia, etc.—(Continued.)

NAME OF STREAM.	POINT OF SECTION.	Cubic feet per sec.	Theoretical horse-power of one-foot head.	Available horse-power of one-foot head.	Approximate head or of 10 feet.	Theoretical power of stream with this head running 24 hours.	Available power of stream with this head working 24 hours of each day.	Condition of stream.	By whom surveyed.	REMARKS.
GORDON COUNTY.										
Oothcaloga.....	Calhoun Mills.....	41.36	4.71	3.76	9.00	43.39	33.81	.....	Barrow.	
Connesauga.....	Mouth.....	203.0	38.10	25.68	12.00	321.20	256.1	.....	"
Graneta Springs.....	5 miles, Calhoun	6.00	0.68	0.54	12.00	8.20	6.56	.....	"
Smoke Creek.....	Near mouth.....	5.00	0.57	0.45	10.00	5.70	4.50	.....	"
Coosawattee.....	Carter's Mill.....	541.0	61.70	49.36	50.00	308.00	248.00	.....	"
Talking Rock.....	At mouth.....	107.00	12.20	9.76	10.00	122.00	97.00	.....	"
Dry Creek.....	Lot 85.....	8.00	0.91	0.72	10.00	9.10	7.20	.....	"
Salacoa.....	117, 7, and 3.....	119.6	13.63	10.90	10.00	136.30	109.00	.....	"
Resaca Creek.....	Resaca.....	12.40	1.41	1.12	10.00	14.10	11.20	.....	"
Lick Creek.....	Lot 116.....	6.00	0.68	0.54	10.00	6.80	5.40	.....	"
Snake Creek.....	113 and 1.....	14.70	1.67	1.32	10.00	16.70	13.20	.....	"
Rocky Creek.....	14, 24, and 3.....	3.50	0.39	0.31	10.00	3.90	3.10	.....	"
John's Creek.....	53, 24, and 3.....	12.56	1.43	1.14	10.00	14.30	11.40	.....	"
WINSTON COUNTY.										
Yellow River.....	Fain's Mill.....	60.0	6.84	5.47	20.00	136.80	109.40	.....	Barrow and Locke	Estimated April 24th for low water.
"	"							"	"
"	Stedman's Mill.....	64.00	7.30	5.84	30.00	219.00	173.20	.....	"	"
"	Montgomery's Mill.....							.....	"	"
Wolf Creek.....	Near Montgomery's Mill.....	38.40	4.38	3.50	14.00	61.32	49.00	Low spring.	"	Or higher.
		5.00	0.57	0.45	10.00	5.70	4.50	"	"	

GWINNETT Co.— <i>Cont.</i>	11.85	1.34	1.07	10.00	13.40	10.70	Low spring.	Barrow and Locke	
Lawrenceville and Buford Rd.	12.00	1.36	1.08	20.00	35.44	28.35	"	"	
Strickland's Mill	2.00	0.23	0.18	18.00	4.10	3.28	"	"	
Ivy Creek							"	"	
HABERSHAM COUNTY.									
Hazel Creek	31.85	3.60	2.88	8.00	28.80	23.04	Ab. low wat.	"	
Seoque River	124.86	13.74	10.99	10.00	137.40	109.90	"	"	
Shoal Creek	3.00	0.34	0.27	12.00	4.10	3.28	"	"	
Tallulah River	458.50	51.27	41.01	400.00	2098.00	16406.40	"	"	
Panther Creek	19.37	2.22	1.76	30.00	66.66	52.22	Low water.	"	
Rocky Creek	3.00	0.34	0.27	20.00	6.86	5.40	"	"	
Rocky Creek	8.85	1.00	0.80	10.00	10.00	8.00	"	"	
Little Mud Creek	33.00	3.76	3.00	10.00	37.66	30.00	Ab. low wat.	"	
Big Mud Creek	20.00	2.28	1.82	10.00	22.80	18.20	"	"	
Ward's Creek	33.75	3.76	2.86	10.00	37.66	28.60	Low spring.	"	
Toccoa Creek	5.20	0.60	0.48	190.00	114.00	91.20	Flush.	"	
Rooper's Creek	5.00	0.57	0.45	10.00	5.70	4.50	"	"	
Seoque River	41.04	4.60	3.68	40.00	184.00	147.20	"	"	
Sutton's Mill Creek	16.80	2.00	1.60	10.00	20.00	16.00	"	"	
Deep Creek	38.50	4.39	3.51	10.00	43.90	35.10	"	"	
Near Batesville	3.00	0.34	0.27	9.00	3.07	2.45	"	"	
Matthews' Mill									
Creek	1.50	0.17	0.13	22.00	3.76	2.86	Barrow.	"	
Panther Creek	4.50	0.51	0.40	20.00	10.26	8.20	"	"	
Nancy Town Creek	5.99	0.60	0.48	10.00	6.00	4.80	"	"	
Cox's Creek	2.00	0.22	0.17	100.00	22.00	17.60	"	"	
Nancy Town Creek									
Branch	2.80	0.32	0.25	15.00	4.78	3.82	"	"	
Dick's Creek	3.32	0.37	0.29	30.00	11.30	9.04	"	"	
Leatherwood Creek	0.75	0.08	0.06	14.00	1.20	0.96	"	"	
Walton's Bridge									
At mouth	5.10	0.58	0.46	10.00	5.80	4.60	"	"	
Toccoa Creek	16.00	1.82	1.45	10.00	18.20	14.50	"	"	
Black Mountain Cr.	1.25	0.14	0.11	10.00	1.40	1.10	"	"	

Falls rapidly.

A Partial List of the Water-Powers in Georgia, etc.—(Continued.)

NAME OF STREAM.	POINT OF SECTION.	Cubic feet per sec.	Theoretical horse-power of one-foot head.	Available horse-power of one-foot head.	Approximate head or an assumed head of 10 feet.	Theoretical power of stream with this head running 24 hours.	Available power of stream with this head working 24 hours of each day.	Condition of stream.	By whom surveyed.	REMARKS.
HABERSHAM Co.— <i>Con.</i>										
Panther Creek.....	Near mouth.....	53.63	6.11	4.88	10.00	61.10	48.80	.....	Barrow.	
HALL COUNTY.										
Chestate.....	Leather's Ford..	290.00	33.00	26.40	12.00	396.00	316.80	.....	"
Yellow Creek.....	Near mouth.....	7.28	0.83	0.66	20.00	16.60	13.28	.....	"
Big Wahoo Creek....	Glade Mine and Leatherwood Ford Road....	14.57	1.66	1.32	10.00	16.60	13.20	.....	"
Middle Wahoo Ck....	Glade Mine and Leatherwood Ford Road....	12.47	1.42	1.13	10.00	14.20	11.30	.....	"
Little River.....	Leatherwood Ford Road....	12.64	1.44	1.15	10.00	14.40	11.50	.....	"
Flat Creek.....	Ab. Glade Mine.	17.28	1.97	1.57	50.00	98.50	78.80	.....	"
Chatahoochee River.....	Shallow Ford....	999.00	106.00	84.80	10.00	1060.00	848.00	.....	"
North Fork Oconee..	Sulphur Springs and Carnesville and Gainesville Road.....	22.37	2.54	2.03	10.00	25.40	20.30	.....	"
" " " " " "	Gainesville Road.....	31.50	3.59	2.87	10.00	35.90	28.70	.....	"
Candler's Creek.....	Carnesville and Gainesville R d	9.60	1.10	0.88	10.00	10.90	8.80	.....	"

Pigeon-Wing Creek	Mouth	2.00	0.23	0.18	10.00	2.30	1.80	Barrow.
Caney Fork	County Line	12.00	1.37	1.11	10.00	13.70	11.10	"
Walnut Fork	Harrington's Ford	15.54	1.77	1.41	30.00	35.40	28.32	"
Holly Branch	Mouth	2.50	0.28	0.22	12.00	3.42	2.73	"
Rocky Shoal Creek	"	2.00	0.23	0.18	10.00	2.30	1.80	"
Allen's Fork	County Line	22.52	2.56	2.04	10.00	25.60	20.40	"
Pond Fork	Mangum's Mill	10.58	1.20	0.96	9.00	10.80	8.64	"
HARALSON COUNTY.								
Tallapoosa	Waldrop's	49.80	5.60	4.48	10.00	56.00	44.80	Low spring.
"	McBride's	586.80	66.56	53.24	10.00	66.56	53.24	Above "
"	Lathrum's	105.60	11.92	9.53	10.00	119.2	95.30	" "
Little River	Croosing	19.48	2.22	1.77	10.00	22.00	17.70	" "
Beach Creek	Rock House	30.50	3.31	2.64	10.00	33.10	26.40	Low water.
Renfroes's Creek	Near mouth, near Drake-town	31.40	3.56	2.85	10.00	35.60	28.54	Above "
HARRIS COUNTY.								
Mulberry Creek	Emery's Mill				60.00			
Mountain Creek	River Road	63.00	7.18	5.74	20.00	143.60	114.88	Low spring, or more.
HEARD COUNTY.								
Potato Creek	County Line	22.00	2.52	2.01	10.00	25.20	20.10	Low spring.
New River	$\frac{1}{4}$ mile mouth	136.08	15.68	12.54	10.00	156.80	125.40	" "
Chattahoochee	Lot 344 and 3d	3000.00	340.80	272.64	10.00	3408.00	2726.40	Low water estimated.
Central Hatchee	Near mouth	100.00	11.34	9.08	10.00	113.40	90.80	Low spring.
JACKSON COUNTY.								
Curry's Creek	Near Jefferson	8.00	0.91	0.72	18.00	16.48	13.13	Barrow.

A 30-foot dam would flood 70 acres or more.

Too full for measurement; has about 150 feet in spring months. Falls 60 ft. in $\frac{1}{4}$ mile.

Sand beds.

Shoals about one mile long.

A Partial List of the Water-Powers in Georgia, etc.—(Continued.)

NAME OF STREAM.	POINT OF SECTION.	Cubic feet per sec.	Theoretical horse-head.	Available horse-head.	Approximate head or assumed head of 10 feet.	Theoretical power of stream with this head running 24 hours.	Available power of stream with this head working 24 hours of each day.	Condition of stream.	By whom surveyed.	REMARKS.
JACKSON Co.—Cont. Oconee River.....	Hurricane Shoals.....	91.39	10.42	8.33	26.00	270.87	216.66	.....	.....	Head is all shoal.
JASPER County. Ocmulgee River.....	Lloyd's Shoals.....	2166.00	246.00	194.80	39.62	9840.00	7877.00	.....	.....
" "	Reach's Shoals.....	2166.00	246.00	196.80	7.30	1845.00	1476.00	.....	.....
" "	Barnes's Shoals.....	1416.00	160.80	128.64	11.64	1851.50	1481.20	.....	.....
" "	Seven Islands Shoals.....	2977.00	331.37	265.09	19.51	6200.00	5966.00	.....	.....
JEFFERSON County. Limestone Creek.....	Tarver's Mill.....	20.00	2.28	1.82	7.00	15.96	12.76	.....	Barrow.	
WILLIAMSON Swamp. " "	No. 11 C. R. R. Hend's Mill.....	100.00	11.36	9.12	10.00	113.60	91.00	.....	"
JOHNSON County. Deep Creek.....	Parson's Mill.....	18.00	2.05	1.64	10.00	20.90	16.40	Above low water.	Locke.	
Buckeye Creek.....	7 m. from mouth of Ocmulgee River.....	30.00	3.42	2.73	10.00	34.20	27.30	" "	"	
JONES County. Ocmulgee River.....	Winterville Road Harris's Shoals.....	5.00	0.57	0.45	10.00	5.70	4.50	" "	"	
" "	Johnston's Shoals.....	2917.00	331.37	265.09	2.30	761.30	609.00	Low water.	Frobell.	Fall exclusive of dam.
" "	Holman's Shoals.....	2917.00	331.37	265.09	5.10	1688.10	1390.50	" "	"	"
" "	"	2917.00	331.37	265.09	1.30	441.60	331.28	" "	"	"

Ocmulgee River.....	Glover's Mill Shoals	2917.00	331.37	265.09	17.90	5938.00	4766.40	Low water.....	Probabl. Barrow.	Fall, exclusive of dam.
LINCOLN COUNTY.	Dill's Mill.....	100.00	11.36	9.18	9.00	102.60	82.08	.....	.....	.....
Lumpkin County.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jones's Creek.....	234, 5 and 1.....	5.00	0.57	0.45	50.00	28.50	22.80	.....	.....	.....
Nimble Will.....	10 miles, Dablowega.....	50.00	5.70	4.56	12.00	68.40	54.72	.....	.....	.....
Etowah River.....	5 miles, Dablowega.....	200.00	22.80	18.24	10.00	228.00	184.40	.....	.....	.....
Cane Creek.....	Near Dablowega.....	40.00	5.6	3.64	10.00	45.60	36.40	.....	.....	.....
Yaboola River.....	Mining Co.....	.....	.....	.....	.....	.....	.....	.....	.....	Very large power Uses only 90 H. P.
McDUFFIE COUNTY.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sweet Water Creek.....	Cotton Card Factory.....	.....	.....	.....	.....	.....	.....	.....	Barrow.	Estimated from wheel.
Little River.....	Belknap Smith.....	47.00	5.35	4.28	21.00	36.00	34.28	.....	.....	.....
Miller County.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spring Creek.....	Colquitt.....	66.56	7.52	6.01	10.00	75.20	60.10	Low water.	Locke.	Banks very flat.
Milton County.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Four Killers.....	Cr. Camp's Mill.....	28.00	2.68	2.12	20.00	53.60	42.40	Flush.	.....	At low water about 10 cubic feet.
Big or Vickery's Creek.....	Above Lebanon Mills.....	114.30	12.95	10.32	10.00	129.50	102.20	Low spring.	.....	.....
Little River.....	Graham's Mill.....	119.00	13.51	10.80	10.00	135.10	108.00	.....	.....	.....
MONROE COUNTY.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bushy Creek.....	4 miles, Danielsville.....	5.00	0.57	0.45	10.00	5.70	4.50	Low spring or more.	.....	.....
Ocmulgee River.....	Taylor's Shoal.....	2917.00	331.37	265.09	5.70	1886.70	1599.30	Low water.	Probabl.	Fall exclusive of dam.
"	Falling Creek	.....	.....	.....	.....	.....	.....	.....	.....	.....
"	Shoal.....	2917.00	331.37	265.09	1.71	562.70	450.16	Low water.	.....	.....
"	Dane's Shoal.....	2917.00	331.37	265.09	2.60	1201.60	973.28	.....	.....	.....
"	Capp's Shoal.....	2917.00	331.37	265.09	5.60	1853.60	1482.88	.....	.....	.....

WATER-POWER OF GEORGIA.

Yellow River.....	716.00	81.30	65.00	7.24	573.00	438.40	Probell.	Fall of shoal ex- clusive of dam.
Oglethorpe Co. Long Creek.....	7.30	0.83	0.66	10.00	8.30	6.60	Barrow.	
PAULDING COUNTY. Tributary Pumpkin- vine.....	6.00	0.68	0.54	12.00	8.16	6.52	Locke. Low spring.	
Little Pumpkinvine.	10.00	1.14	0.91	20.00	22.80	18.24	" "	
Raccoon Creek.....	22.00	2.51	2.00	12.00	30.00	24.00	" "	
Peggy more, near mouth.....	11.18	1.26	1.01	10.00	12.60	10.10	Locke. Low water.	Or flush
Sweet Water.....	12.00	1.36	1.08	10.00	13.60	10.80	" "	
PICKENS COUNTY. Big Scared Corn Road.....	11.00	1.25	1.00	10.00	12.50	10.00	Barrow.	
Little Scared Corn. Fairmount and Jasper Road.....	4.50	0.51	0.40	10.00	5.10	4.00	" "	
Talking Rock Creek Federal Road.....	13.33	1.53	1.21	10.00	15.30	12.10	" "	
Love's Creek.....	7.00	0.79	0.63	18.00	14.36	11.48	" "	
Long Swamp.....	40.00	4.56	3.64	10.00	45.60	36.40	" "	
Tributary of Long Swamp.....	6.00	0.68	0.54	10.00	6.80	5.40	" "	
Segall's Mill Creek. Stegall's Mill.....	10.00	1.14	0.91	10.00	11.40	9.10	" "	
Long Swamp.....	23.00	2.62	2.09	10.00	26.80	20.60	" "	
Fort Swamp.....	8.11	0.99	0.73	12.00	11.08	8.86	" "	
POLK COUNTY. Jasper Road.....	25.00	2.85	2.28	10.00	28.50	22.80	" "	
Rockmart.....	19.00	2.15	1.72	10.00	21.50	17.20	Minimum low water. Low spring.	
2 miles, North Rockmart.....	5.40	.61	.49	90.00	54.90	44.10	" "	
Highover's Mill.....	5.00	.57	.45	10.00	5.70	4.50	" "	
Rome and Van Wert Road, 2 miles from Van Wert.....	17.70	2.00	1.60	10.00	20.00	16.60	" "	
Young's Mill.....	9.60	1.08	.86	10.00	10.80	8.60	" "	
Cedar Town.....								
Big Spring.....								

A Partial List of the Water-Powers in Georgia, etc.—(Continued.)

NAME OF STREAM.	POINT OF SECTION.	Cubic feet per sec.	Theoretical horse-power of one-foot head.	Available horse-power of one-foot head.	Approximate head or an assumed head of 10 feet.	Theoretical power of stream with this head.	Available power of stream with this head running 24 hours.	Available power of stream running 24 hours of each day.	Condition of stream.	By whom surveyed.	Remarks.
POLK COUNTY—Cont. Out Creek.....	At mouth.....	27.00	3.06	2.45	10.00	30.60	24.50	24.50	Low spring or more.	Barrow,	
QUITMAN COUNTY. Hobbs Creek.....	Near mouth.....	6.00	0.68	0.54	10.00	6.80	5.44	5.44	Low water.	Locke.	
Talbott County. Tobacco Creek.....	1 mile S. E. of Georgetown.....	10.00	1.14	0.91	10.00	11.40	9.12	9.12	"	"	
RAVEN COUNTY. Head of Stekoa.....	Near Clayton.....	3.75	0.43	0.34	30.00	12.90	10.32	10.32	"	Barrow.	
Wildcat Creek.....	Mouth.....	30.00	3.48	2.73	18.00	41.04	32.83	32.83	"	"	
Tiger Creek.....	"	50.00	5.70	4.56	10.00	57.00	45.60	45.60	"	"	
RANDOLPH COUNTY. Roaring Branch.....	5 miles from Fort Gaines.....	4.00	0.45	0.36	30.00	13.50	10.60	10.60	Low water.	Locke.	Very high heads at times.
Wakeforest Creek...	Near Chemochebee.....	5.00	0.57	0.45	10.00	5.70	4.50	4.50	"	"	
RICHMOND COUNTY. Augusta Canal.....	Augusta.....	.....	.....	.....	.....	14000.0	12000.0	12000.0	"	B. Holly, Canal Engineer.	
Little Spirit Creek...	At mouth.....	12.00	1.36	1.08	8.00	10.94	8.75	8.75	"	Barrow.	

WATER-POWER OF GEORGIA.

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Locality	Barrow.	Low water.	Locke.	Estimated.	Too full to measure.
Scriven County.					
Beaver Dam Creek.....	55.76	9.60	Locke.		
Briar Creek.....	515.68	10.80	"		
Rocky Creek.....	5.47		"		
Stewart County.					
Wimberly's Branch.....	69.70	12.00	"		
Hodchodkee.....	7.00	10.00	"		
Twigg's County.	7.96	12.00	"		
Big Sandy.....	51.50	10.00	"		
Troup County.	1.09	5.00	"		
Shoal Creek.....	9.95	8.00	"		
Muddy Creek.....	64.46		"		
Blue John.....	1.37		"		
Panther Creek.....	8.80	1.00	"		
Flat Creek.....	12.00	1.35	"		
Beach Creek.....	81.00	9.23	"		
Yellow Jacket.....	7.00	0.79	"		
Walker County.	3.00	0.34	"		
Fork of Dry Creek.....	25.00	2.84	"		
Washington County.	20.00	2.27	"		
Creek at.....	35.00	1.82	"		
Ogeechee River.....	87.36	3.20	"		
	6.50	8.03	"		
	12.00	0.99	"		
	100.80	1.08	"		
White County.					
Chickamauga.....	11.49	9.19	"		
Little Chickamauga.....	33.12	3.78	"		
Bean Creek.....	3.00	0.34	"		
Chattahoochee.....	6.50	0.97	"		
	72	6.60	"		
	226.80	6.38	"		
		20.70	"		
		258.00	"		

A Partial List of the Water-Powers in Georgia, etc.—(Continued.)

NAME OF STREAM.	POINT OF SECTION.	Cubic feet per second.	Theoretical power of one-foot head.	Available power of one-foot head.	Approximate head or assumed head of 10 feet.	Theoretical power of stream with this head running 24 hours.	Available power of stream with this head running 24 hours of each day.	Condition of stream.	By whom surveyed.	REMARKS.
WHITE CO.—Cont.										
Smith's Creek	Mouth.....	14.00	1.60	1.28	10.00	16.00	12.80	Low water.	Barrow.	
"	Anna Rubie Falls.....	7.10	0.81	0.64	300.00	243.00	194.40	"	"	
Dean's Ditch	"	5.15	0.59	0.47	10.00	5.90	4.70	"	"	
Duke's Creek	Minnehaha Falls.....	3.60	0.41	0.32	300.00	123.00	98.40	Minimum low water.	"	
N. Prong Duke's Creek	Near Minnehaha Falls.....	12.88	1.47	1.17	300.00	441.00	352.80	"	"	
Tenatee	Dr. Moody's.....	95.31	10.83	8.66	10.00	108.30	86.60	Low water.	Barrow.	
White's Creek	Poe's Mill.....	10.50	1.20	0.96	13.00	15.60	12.48	"	"	
Mary Creek	Gainesville and Cleveland R.R.	9.10	1.02	0.81	10.00	10.20	8.00	"	"	
WHITEFIELD COUNTY.										
Creek	County Line.....	5.50	0.62	0.49	10.00	6.20	4.90	"	"	
Swamp Creek	Lot 113.....	34.00	3.87	3.09	10.00	38.70	30.90	"	"	
Carpenter's Creek	1/2 mile south Tilton.....	11.00	1.25	1.00	10.00	12.50	10.00	"	"	
Mill Creek	148, 13, and 3.....	16.00	1.82	1.45	10.00	18.20	14.50	"	"	
"	Dug Gap.....	13.00	1.48	1.18	10.00	14.80	11.80	"	"	

It must be remembered that this is but a partial list, and that there are several fine water-powers in other counties.

MINERAL WATERS.

There is a great abundance of chalybeate or iron waters in the State in different geological formations. Limestone springs in the northwestern portion are numerous. Sulphur springs do not occur in great numbers.

The circumstances of the preparation of this outline do not allow more than an enumeration of those springs which have for years been resorted to for their medicinal properties:

Catoosa Springs, Catoosa County.
Gordon Springs, Whitefield County.
Cohutta Springs, Murray County.
Rowland Springs, Bartow County.
Dougherty's Spring, Polk County.
Camp's Spring, Fulton County.
Ponce de Leon Spring, Fulton County.
Atlanta Mineral Spring, Fulton County.
New Holland Spring, Hall County.
Sulphur Spring, Hall County.
Porter's Springs, Lumpkin County.
Madison Springs, Madison County.
Helicon Springs, Clarke County.
Indian Springs, Butts County.
Mineral Spring, Coweta County.
Newnan Spring, Coweta County.
Sulphur Spring, Meriwether County.
Warm Spring, Meriwether County.
Chalybeate Spring, Meriwether County.
Glenn's Spring, Early County.
Springfield Spring, Effingham County.
Heard's Spring, Wilkes County,
Franklin Springs, Franklin County.

*Analysis of Camp's Mineral Spring at West End, 2¼
miles from Union Depot, in Atlanta.*

	Grains.
Sulphuretted hydrogen gas	0.1720
Protocarbonate of iron	2.0320
Sesquicarbonate of iron . . . . .	.3520
Protocarbonate of manganese . . . . .	.0050
Carbonate of manganese . . . . .	.0520
Carbonate of lime . . . . .	.3020
Chloride of calcium . . . . .	.1190
Chloride of sodium . . . . .	.1320
Silicate of soda and lime . . . . .	.4300
Crenic and apocrenic acids . . . . .	.0180
Free carbonic acid	1.0370
	<hr/> 4.8660

Total solid matter dried at 212° F. = 3.5324.

Analyzed by W. J. LAND, *Chemist.*

CHAPTER XI.

Manufactures—Mineral Region—Iron-Furnaces—Character of the Minerals—Height of Mountains.

THE following interesting information is obtained from tables prepared by Dr. Thomas P. Janes, the Commissioner of Agriculture.

There are in Georgia 36 cotton-factories, with 123,233 spindles and 2125 looms; there are 14 woollen-factories, with 4200 spindles and 135 looms. Nearly all of these 50 factories are run by water-power. There are 1375 grain-mills, of which 1262 are run by water. In these mills are 1453 run of stones for corn, and 556 for wheat. There are 734 saw-mills, of which 539 use water-power. There are also 77 wagon- and carriage-factories, 6 iron-furnaces, 7 iron-foundries, 11 lime-kilns, 4 potteries, 68 tanneries, 6 turpentine-distilleries, 2 rolling-mills, 5 paper-mills, 12 furniture-manufactories, 6 sash-, blind-, and door-manufactories, 3 rice-mills, 1 shoe-manufactory, 1 broom-manufactory, 2 manufactories of farm-implements, 2 rope- and twine-factories, 1 stove-manufactory.

Since the publication of the tables containing the above information, one large cotton-factory has been completed in Columbus and one in Augusta.

THE MINERAL REGION OF GEORGIA.

This region embraces, in the main, Northwest or Cherokee Georgia. That portion containing the coal and fossiliferous iron-ore runs northeast and southwest from Tennessee into Alabama, and embraces a series of ridges named Sand Mountain, Lookout Mountain, Taylor's Ridge, John's Mountain, and Chattoogata Ridge. The Cohutta Moun-

tains, which are a continuation of the Unaka Range of Tennessee, run north and south, and contain copper-ore, with some lead- and silver-ore. On the western border of this range are found beds of iron-ore and slate, baryta, manganese, and brown hematite. To the east, between the Cohutta Mountains and the Blue Ridge, is one belt of marble, and adjacent to it are the gold-bearing schists, extending from North Carolina to Alabama, which reappear on the south side of the Blue Ridge. The rich gold region of Georgia is in the counties of Habersham, White, Lumpkin, Forsyth, and Hall. The following list of iron-furnaces in Georgia was also prepared by Dr. Janes.

LIST OF IRON-FURNACES IN GEORGIA.

		Capacity. Tons per Day.			
1. Bartow Furnace,	Bartow Station, Bartow Co.	20			
2. Charcoal "	" " "	7			
3. Rogers "	Rogers "	7	Out of blast.		
4. Pool's "	Stamp Creek "	4	" "		
5. Brown and Thomas Furnace,	" "	4	" "		
6. Cherokee Furnace,	Polk "	40?	Not in blast.		
7. Ætna "	" "	10	" "		
8. Ridge Valley Furnace,	Floyd "	12	" "		
9. Rising Fawn "	Dade "	50			
10. Ward's Diamond Furnace,	Bartow Co.	4			
11. Stamp Creek Furnace,	" "	4	Not in use.		
12. Etowah Furnace,	" "	4	" "		
13. Allatoona "	" "	4	" "		
14. Phoenix "	Dade "	40	Not completed.		
15. Cherokee "	" "	40	" "		
		250			

The following table of minerals found in Georgia, and their physical characters, was prepared by Dr. George Little, the State Geologist, for the Hand-Book published under the auspices of the Commissioner of Agriculture.

Physical Characters of Minerals found in Georgia.

No.	NAME.	CHEMICAL COMPOSITION.	SPECIFIC GRAVITY.	HARDNESS.	COLOR.	LOCALITY.	Uses.
1	Diamond.....	Carbon.....	3.5	10	Colorless.	White, Hall, Dawson.	Lead pencils.
2	Graphite.....	".....	2	1-2	Black.	Pickens, Carroll, Elbert.	Fuel.
3	Coal.....	Sulphur.....	1.2-1.7	1-2.5	"	Dade, Walker, Chattooga.	Sulphuric acid
4	Sulphur.....	Gold.....	2	1.5-2.5	Yellow.	Fulton, Haralson.	and gunpowder.
5	Gold.....		19.3	2.5-3	Yellow, gold.	White, Lumpkin, Hall, Carroll, etc.	
6	Tetradymite.....	Telluric Bismuth.....	7.2-8.4	1.5-2	Steel gray.	Paulding, Lumpkin.	
7	Galena.....	PbS.....	7.2-7.7	2.5	Lead gray.	Murray, Hall, Habersham.	
8	Pyrite.....	FeS ₂	4.8-5.1	6-6.5	Bronze yellow.	Haralson, Fulton.	
9	Mispickel.....	FeS ₂ + FeAs ₂	6.0-6.4	5.5-6	Steel gray.	Floyd.	
10	Molybdenite.....	MoS ₂	4.4-4.8	1-1.5	Lead gray.	Habersham.	Sulphuric acid.
11	Chalcocopyrite.....	CuS + FeS ₂	4.1-4.3	3.5-5	Brass yellow.	Fauntleroy, Towns, Cherokee, Paulding, Haralson, Carroll, Greene, and Fulton.	Arsenic.
12	Halite.....	NaCl.....	2.1-2.5	2.5	White.	Harris, Talbot, Carroll, Habersham, Lumpkin.	Copper.
13	Magnetite.....	FeO + Fe ₂ O ₃	5.	5.5-6	Black.	De Kalb, Meriwether.	Table salt.
14	Franklinite.....	FeO + Mn ₂ O ₃	5.5-6.5	5.	"	Habersham.	Iron.
15	Chrome Iron.....	FeO + Cr ₂ O ₃	4.3-4.5	5.5	"		Paints.
16	Water.....	H ₂ O.....	1.	1.5	Colorless.	Towns, Rabun, Carroll.	Gem and for polishing.
17	Corundum.....	Al ₂ O ₃	3.9-4.0	9.	"		
18	Hematite.....	Fe ₂ O ₃	5.	5-6.5	Pink and blue, steel gray, and iron black.	Bartow.	Iron.
19	Ilmenite.....	TiO ₂ + FeO.....	4.5-5	5-6	Black.	Bartow, Towns.	
20	Pyrolusite.....	MnO ₂	4.8	2-3.5	"	Lincoln, Habersham.	Coloring arti-
21	Rutile.....	TiO ₂	4.1-4.2	6-6.5	Yellowish black.		ficial teeth.
22	Limonite.....	Fe ₂ O ₃ + H ₂ O.....	3.6-4	5-5.6	Dark brown.	Polk, Bartow, Gilmer, Fannin, Murray, Burke, etc.	Iron.

Physical Characters of Minerals found in Georgia—(Continued.)

No.	Name.	Chemical Composition.	Specific Gravity.	Hardness.	Color.	Locality.	Uses.
23	Quartz.....	SiO ₂	2.5	7.	Colorless.	Gwinnett Troup, Habersham, Ogeethorpe, Harris, Talbot, etc.	Gem.
24	Opal.....	SiO ₂ +H ₂ O.....	1.9-2.3	5.5-6.5	White, yellow, red, gray, etc.	Washington.	
25	Meteorite Iron.....	Fe&Ni.....	7.3-7.8	4.5	Iron gray.	Whitefield.	
26	Pyroxene.....	(CaMgFe)SiO ₃	3.2-3.5	5-6	White, green, and black.		
27	Rhodonite.....	MnSiO ₃	3.4-3.6	5.5-6.5	Red and brown.		
28	Hornblende.....	(MgCa)SiO ₃ } (AlFe)SiO ₃ }	2.9-3.4	5-6	White to black.		
29	Beryl.....	Al ₂ (Be ₃ Si ₆)O ₁₈	2.6-2.7	7.5-8	Green.	Meriwether, etc.	
30	Chrysolite.....	Mg ₂ FeO ₄	3.3	6.5-7	Red and brown.	Roberts, White.	
31	Garnet.....	Mg ₃ Fe ₂ (SiO ₄) ₃	3.1-4.3	6.5-7.5	Green, brown.	Faulding, Cherokee Troup.	
32	Epitrite.....	Ca ₂ (Fe ₂ Si ₂)O ₁₀	3.3-4	6.5	Black.		
33	Blotite.....	{K, Na, Li, Fe, Mn}O ₂	2.7-3.1	2.5-3	Colorless.		
34	Muscovite.....	SO ₂ Al ₂ O ₃ FeO ₂ MgO.....	2.8-3.1	2.5	Brown.	Talbot.	
35	Labradorite.....	SO ₂ Al ₂ O ₃ CaO.....	2.6-2.7	6	White and red.		
36	Orthoclase.....	SiO ₂ Al ₂ O ₃ KO.....	2.4-2.6	7-7.5	Dark brown.		
37	Staurolite.....	SiO ₂ Al ₂ O ₃ FeO.....	3.6	5-7	White and blue.		
38	Kyanite.....	SiO ₂ Al ₂ O ₃ FeO.....	3.6	7-7.5	Black, brown.		
39	Tourmaline.....	NaOFeO ₂ FeO ₂ CaO.....	3.0-3	7.8	White, gray.		
40	Talc.....	SiO ₂ MgOFeO ₂ OH.....	2.5-2.9	1-1.5	White to red.		
41	Saponite.....	SiO ₂ Al ₂ O ₃ MgO.....	2.6	2.5	White to green.		
42	Serpentine.....	SiO ₂ MgOFeO ₂ OH.....	2.5	2.5-4	Green.		
43	Chlorite.....	SiO ₂ Al ₂ O ₃ FeO ₂ MgO, H ₂ O.....	2.6-2.8	1.5	White.	Bartow.	
44	Barite.....	BaSO ₄	4.3-4.8	2.5-3.5	Gray.		
45	Gypsum.....	CaSO ₄ ·2H ₂ O.....	2.3	1.5-2	Green, brown.		
46	Pyromorphite.....	PbO ₂ PO ₄	6.5-7	3.5-4			

Physical Characters of Minerals found in Georgia—(Continued.)

No.	NAME.	CHEMICAL COMPOSITION.	SPECIFIC GRAVITY.	HARDNESS.	COLOR.	LOCALITY.	Uses.
47	Lazulite.....	$\text{Al}_2\text{SiO}_5\text{FeO}_2\text{MgOPO}_3$	3.	5-6	Blue.	Lincoln.	
48	Wavellite.....	$\text{Al}_2\text{O}_3\text{H}_2\text{OPO}_3$	2-2.5	3.5-4	White, yellow.	Polk.	
49	Calcite.....	CaCO_3	2.5	3	White.		
50	Siderite.....	FeCO_3	3.7	3-4.5	Gray to brown.	Carroll.	
51	Malachite.....	CuCO_3	4.	3.5-4	Green.	Greene, Paulding.	
52	Stilbite.....	$\text{SiO}_2\text{Al}_2\text{O}_3\text{CaOH}_2\text{O}$	2.1	3.5-4	White.	Fulton.	

Physical Characters of Minerals found in Georgia—(Continued.)

No.	NAME.	CHEMICAL COMPOSITION.	SPECIFIC GRAVITY.	HARDNESS.	COLOR.	LOCALITY.	Uses.
47	Lazulite.....	$\text{Al}_2\text{O}_3\cdot\text{SiO}_2\cdot\text{Fe}_2\text{O}_3\cdot\text{MgOPO}_4$	3	5-6	Blue.	Lincoln.	
48	Wavellite.....	$\text{Al}_2\text{O}_3\cdot\text{H}_2\text{OPO}_4$	2-2.5	3.5-4	White, yellow.	Polk.	
49	Calcite.....	CaCO_3	2.5	3	White.		
50	Siderite.....	FeCO_3	3.7	3-4.5	Gray to brown.	Carroll.	
51	Malachite.....	CuCO_3	4	3.5-4	Green.	Greene, Paulding.	
52	Stibnite.....	Sb_2S_3	4.7	3.5-4	White.	Fulton.	

CRYSTALLINE ROCKS.

1. Dolerite consists of labradorite, augite, and magnetic iron.
 2. Diabase " " " " chlorite.
 3. Hypersthenite consists of labradorite and hypersthene.
 4. Diorite " " hornblende and albite.
 5. Syenite " " " orthoclase.
 6. Granite " quartz, mica, and feldspar.
 7. Gneiss " " " " " *banded*.
 8. Granulite " " and granular feldspar.
 9. Mica slate " mica, which is varied by addition of other minerals.
- Hydromica slate or schist, quartz, and hydrous mica, and called talcose when it consists of quartz, mica, and talc.
- Chloritic slate consists of quartz, mica, and chlorite.
- Hornblende slate consists of quartz, mica, and hornblende.
- Graphitic slate " " " " graphite.
10. Itacolumite " " and talc.

SEDIMENTARY ROCKS ARE

Clayey, as shales, slates.

Marly, as beds of sand and clay with shells.

Calcareous, as limestone, dolomites.

Siliceous, as laminated sandstones, sand-beds, etc.

Conglomerate, as granite conglomerate of Augusta, ferruginous conglomerate of the drift.

Carbonaceous, as coal-seams, lignite-beds, graphitic slates.

SYMBOLS OF CHEMICAL ELEMENTS IN MINERALS.

For the sake of brevity, chemists have adopted the following symbols to represent the different elements and their combinations:

Oxygen = O.	Tellurium = Te.
Hydrogen = H.	Arsenic = As.
Carbon = C.	Molybdenum = Mo.
Sulphur = S.	Zinc = Zn.
Silicon = Si.	Chromium = Cr.
Titanium = Ti.	Nickel = Ni.
Chlorine = Cl.	Silica or sand = $\text{SiO}_2 = \text{Si} + 2\text{O}$.

Sodium or natrium = Na.	Alumina = $\text{Al}_2\text{O}_3 = 2\text{Al} + 3\text{O}$.
Potassium or kalium = K.	Ferric oxide = $\text{Fe}_2\text{O}_3 = 2\text{Fe} + 3\text{O}$.
Calcium or lime metal = Ca.	Ferrous oxide = FeO .
Magnesium = Mg.	Manganic oxide = Mn_2O_3 .
Barium = Ba.	Manganous oxide = MnO .
Clay metal or aluminum = Al.	Calcic oxide (lime) = CaO .
Iron or ferrum = Fe.	Magnesia = MgO .
Manganese = Mn.	Water = $\text{H}_2\text{O} = 2\text{H} + \text{O}$.
Cuprum or copper = Cu.	Soda = NaO .
Plumbum or lead = Pb.	Potash = KO .
Aurum or gold = Au.	Baryta = BaO .
Bismuth = Bi.	Boracic acid = BO_3 .

According to measurements made by the United States Coast Survey, the elevations of the principal mountains in North Georgia are as follows:

Enota, in Towns County, 4796 feet high.
 Rabun Bald, in Rabun County, 4718 feet high.
 Blood, in Union County, 4468 feet high.
 Tray, in Habersham County, 4435 feet high.
 Cohutta, in Fannin County, 4155 feet high.
 Yonah, in White County, 3168 feet high.
 Grassy, in Pickens County, 3090 feet high.
 Walker's, in Lumpkin County, 2614 feet high.
 Pine Log, in Bartow County, 2347 feet high.
 Sawnee, in Forsyth County, 1968 feet high.
 Kennesaw, in Cobb County, 1809 feet high.
 Stone Mountain, in De Kalb County, 1686 feet high.

I am indebted to Dr. Thomas P. Janes for the following list of newspapers in Georgia:

There are 9 daily, 91 weekly, and 4 monthly newspapers and periodicals in Georgia, having an aggregate circulation of about 150,000 copies, classified as follows:

Daily.—9 news and political; aggregate circulation, 35,900. (This includes the daily, tri-weekly, and weekly editions of these papers; and these weeklies are not counted with the other weeklies of the State.)

Weekly.—84 news and political; aggregate circulation, 74,500.

Weekly.—4 religious; aggregate circulation, 19,500.

Weekly.—2 literary; aggregate circulation, 11,500.

Weekly.—1 agricultural; aggregate circulation, 4500.

Monthly.—2 medical; aggregate circulation, 1550.

Monthly.—2 agricultural; aggregate circulation, 2850.

CHAPTER XII.

Productions of Georgia.

I HAVE permission to make the following extract of almost an entire chapter of Dr. Janes' Hand-Book. It will be found interesting and instructive; for it is full of the most valuable information to persons who may desire homes in the Empire State of the South:

"VARIETY OF PRODUCTS, AGRICULTURAL AND HORTICULTURAL.

"There is no single State in the Union with such variety of climate and production as Georgia possesses. There is nothing grown in any of the States except Florida which cannot be profitably grown in Georgia. A few tropical fruits grow in Southern Florida which cannot be raised in Georgia.

"The following products grow successfully in the State, viz.:

"*Cereals*.—Corn, wheat, oats, rye, barley, and rice—all the cereals—are grown on a large scale, except rye and barley, which are grown principally for winter and early spring pasturage.

"*The Textiles*.—Cotton, wool, flax, hemp, jute, ramie, and silk all grow well in Georgia, but the culture of cotton has largely overshadowed the others.

"*Sugar, syrup, and molasses* are made on a considerable scale in the southern part of this State from tropical cane, and sorghum syrup in the middle and northern sections.

"*Tobacco* of very fine quality is grown in any portion of the State where proper attention is given to it, but it is not extensively cultivated for market, though many farms produce a home supply.

"*Peas* and *beans* of every description are grown with little difficulty in every county in the State, and what is known as the cow- or field-pea is a crop of great importance in all the cotton belt of the State, both as a source of forage and soil fertilization.

"*The Ground-Nuts*.—Pindars, goobers, and chufas are grown very cheaply, yielding largely, principally to be gathered by hogs.

"*Roots and tubers* of every kind grow finely, and are receiving more attention each succeeding year. Among those principally raised are sweet and Irish potatoes, turnips, carrots, parsnips, and mangel-wurzel.

"An excellent article of *tea* has been grown in the southeastern part of the State, and succeeds well in other portions.

"*Indigo* grows wild in the lower part of the State, and was at one time cultivated to some extent, but has been overshadowed by cotton-culture.

"*Fruits*.—Every variety of fruit known to the temperate zone succeeds in Georgia except the cranberry and sweet cherry.

"*Vegetables*.—Every variety of vegetables is cultivated successfully. In the larger portion of the State, fresh vegetables in great variety may be gathered from the garden throughout the winter.

"*Stock*.—There has been but little attention to stock-raising, except in individual instances, in consequence of the absorbing interest felt in cotton-culture, which has left little time or area for successful stock-raising. The results attained by those who have given attention to it

show that Georgia is admirably adapted to stock of every kind,—especially so to sheep.

“**POULTRY.**—Poultry of every kind are raised with perfect success,—the turkey and duck being found wild in our forests and streams.

“**FOREST PRODUCTS.**—In the older parts of the State much of the finest forests have been destroyed to make room for cultivation, but in portions of Middle and Northern Georgia there is still an abundant supply of hard-wood lumber, suitable for manufacturing railroad-cars, wagons, and agricultural implements, besides a great variety suitable for manufacturing furniture; also forests of soft yellow pine in Northwest Georgia; while in Southern Georgia there are millions of acres of magnificent yellow-pine forests suitable for general building purposes, ship-building, etc. Within the last few years turpentine-plantations have been opened in these forests for the purpose of manufacturing naval stores. Large quantities of timber and lumber are being annually shipped from Brunswick and Darien to Northern, European, and South American ports. In the southeastern portion of the State the live-oak, a valuable wood for ship-building, abounds.

“**GRASSES.**—There are grasses adapted to every section of the State, both for pasturage and hay, surpassing in annual production, under careful culture, the heaviest yield per acre of those portions of the United States in which hay is a staple crop, as will be shown under the results of improved culture, which are to follow.

“**AREAS OF PRODUCTION OF STAPLE CROPS.**

“While there are general outlines of the production of the various crops, each sometimes crosses the general line under favorable circumstances of soil and altitude.

"Corn and oats are cultivated in every county in the State.

"The wheat area proper extends from the northern border of the State to the general line of division between the Primary and Tertiary and Primary and Cretaceous formations, which conforms roughly to the falls of the rivers, reaching from the Savannah River above Augusta, following generally the line of the Georgia Railroad to Warrenton, the Macon and Augusta Railroad to Macon, thence north of the line of the Southwestern Railroad to Butler, and thence to the falls of the Chattahoochee, at Columbus. By rather a strange coincidence, the area of sugar-cane culture extends from the southern boundary of the State to the above general limit of the wheat area, each seeming to be generally controlled by the combination of elevation and soil,—the wheat selecting greater elevation and stiffer soils, the cane the lower elevation and siliceous soils,—each occasionally passing over the general line when the above conditions are favorable,—wheat being successfully grown even to the southern boundary in localities of unusual elevation and on soils having a considerable admixture of clay, or with a clay subsoil. Sorghum covers the same general area as wheat, but encroaches more uniformly upon the cane area than does wheat.

"The area of upland cotton-culture proper reaches from a line on the north, extending from the Savannah River through Athens and Atlanta to the Alabama line, to the Florida line on the south, and to the head of tidewater on the southeast. This area has been practically extended fifty miles farther north by the use of stimulating fertilizers.

"The most productive part of the cotton area is Middle Georgia proper and Southwest Georgia.

"The area of sea island or long staple cotton proper

extends from the head of tidewater to the ocean, and includes the islands, being the same as that of lowland rice. The latter has been very successfully cultivated, however, as far into the interior as Pike County, more than one hundred miles from the ocean, under favorable circumstances of alluvial soil susceptible of irrigation, from which it appears that the essential conditions of its successful growth are rather alluvial soil and irrigation than proximity to the sea or a very low elevation.

"Upland rice is grown on a small scale in all the cotton belt proper, and would be grown more extensively if the process of hulling it could be rendered less tedious by the invention of some simple and cheap machine for that purpose.

"Clover grows well on any fertile clay or clay-loam soil in the wheat belt proper. Lucerne succeeds well on any soil in any locality in the State, if it is made rich and properly prepared.

"The field-pea is grown in every section of the State, but is cultivated principally in Middle and Lower Georgia as a field crop. The usual manner of its culture is between the rows of corn,—the peas being planted at the second working of the corn, and ploughed once when the corn is cultivated the last time. The peas usually make but little growth until the corn has nearly reached maturity, when they take possession of the soil and make a very rapid growth. It is a very cheap and valuable crop, being valuable as food for man and beast, as well as a fertilizer of the soil,—nearly equal in value, as such, to clover or lucerne.

"Sweet potatoes are grown in nearly every county in the State (a small portion of Northeast Georgia being the exception), and turnips in all parts,—the former succeeding best on sandy soil, the latter on rich sandy loam.

"The Irish potato produces well in every section of the State, but the first crop matures too early in Middle and Lower Georgia to be easily preserved through the following winter. A second crop may be raised in these sections by planting the product of the spring crop in July or August, and properly mulching them to retain sufficient moisture to cause them to germinate. The second crop, from reproduction, is, in favorable seasons, often as good as the first, and keeps well through the winter. The mountain region of North Georgia is the best adapted to the production of the Irish potato for market, since, at that elevation, the crop does not mature so early that it may not be easily kept through the winter. They are profitably cultivated on the coast for an early supply of northern markets.

"FRUITS.—The *apple* succeeds well in every portion of the State where there is an elevation of four hundred or five hundred feet, and a clay soil or subsoil, both of which are generally found combined in Upper-Middle and Northern Georgia. The trees do not attain such size in Lower-Middle and Southwest Georgia as in the mountain regions, nor do they live so long; but the coloring and flavor of the fruit in the cotton belt are superior to that grown in the more elevated regions of the northern part of the State. Near the coast, and in many other parts of Southern Georgia, the soil is too sandy and the elevation insufficient to sustain healthy trees.

"The *pear* grows well in every section of the State where proper attention is given to the preparation and fertilization of the soil,—the only difficulty being in the prevalence of the blight of the trees. Thomas County, Georgia, has, thus far, almost escaped this scourge. With the exception of a few localities, its culture is confined to Northern and Middle Georgia. The latter section,

though producing smaller trees, far surpasses the former in quality of fruit.

"One reason for the short *duration of the life* of apple- and pear-trees in Middle and Southern Georgia is found in the fact that, owing to the long growing season, the trees make a second growth in August and September, in which the tendency is more to the production of fruit-buds than wood-buds,—the spring growth being devoted mainly, in a thrifty tree, to the production of wood-buds for the next year's growth. This being the case, trees not unfrequently produce crops of fruit annually for ten years in Middle and Southern Georgia, while biennial production is the rule farther north. The *annual* fruitage produces an unusual drain upon the vital power of the tree, which requires extraordinary fertilization. The necessity of this has not been recognized generally by fruit-growers, and the necessary food has not been supplied. Trees grown in proximity to dwellings or horse-lots where they receive an accidental supply of manure are found to possess unusual longevity.

"Middle Georgia and the elevated plateaus of the southwestern portion of the State seem to be the home of the *peach*, which fact needs only to be sufficiently appreciated by the people of those sections to induce them to embark in its culture on a large scale to make it a prominent source of revenue. Some parties who have cultivated on a sufficient scale to ship by the car-load have found it a lucrative business. By cultivating the early varieties we have a monopoly of the markets of the Northern cities for a month while prices are ranging highest. The same may be said of pears. Our whole crop of Bartlett and Duchess pears could be sold in New York before those of Virginia even are ripe.

"*Grapes* grow well in every section of the State, and in

sufficient variety for every purpose, though but little attention has thus far been paid to wine-making. The Scuppernong is peculiarly adapted to Middle and Southern Georgia, seldom failing to produce a good crop, never killed by frost, and entirely free from all diseases and insect pests. All that it needs is room enough in which to 'spread itself.'

"*Figs* and *pomegranates* grow admirably in Middle and Southern Georgia, needing no protection in winter except in the upper part of the middle belt.

"The *olive* succeeds well on the coast, and was formerly cultivated, but is now quite abandoned.

"The *pecan* and *English walnut* succeed well, and are being planted to some extent.

"Raspberries, strawberries, mulberries, cherries, and plums are grown in profusion in every part of the State.

"The semi-tropical fruits—*oranges*, *lemons*, and *bananas*—are successfully grown in the southern and coast tiers of counties.

"The *watermelons* and *cantaloupes* of portions of Middle Georgia are quite celebrated for their quality, and are becoming a source of considerable revenue. Within a few years the watermelon crop of Richmond County has grown to considerable commercial importance. In 1874 three hundred and sixteen thousand four hundred and fifty melons were sold in or shipped from Augusta. The soil of Richmond and several adjoining counties seems to be peculiarly adapted to the production of watermelons and cantaloupes; though they grow to great perfection on sandy soils in many parts of the State.

"In Thomas County may be seen, in addition to all the agricultural productions of the temperate and semi-tropical zones, the apple, pear, peach, plum, pomegranate, fig, quince, cherry, grape, raspberry, blackberry, strawberry,

mulberry, orange, lemon, and banana all growing within the same orchard. There are few countries thus favored by such a combination of soil and climate.

"In less than a score of years the fruit-crop of Georgia will be second only to cotton in commercial importance, if proper attention is given in aid of natural advantages.

"RESULTS SHOWING THE CAPACITY OF GEORGIA SOIL UNDER IMPROVED CULTURE.

"In order to illustrate the capacity of the soil of Georgia under proper preparation and fertilization, such as is given in the more densely settled portions of the world, a few results are taken from the transactions of the State and county fairs during the last few years,—all on affidavit of disinterested parties :

"In 1873, Mr. R. H. Hardaway, in Thomas County, produced on upland 119 bushels of corn on 1 acre, which yielded a net profit of \$77.17.

"This year (1876) Mr. G. J. Drake, of Spalding County, produced 74 bushels of corn on 1 acre of upland.

"In 1873, Mr. S. W. Leak, of Spalding County, produced on 1 acre $40\frac{1}{4}$ bushels of wheat, worth \$80.50; cost, \$14.50; net profit, \$66.00.

"To illustrate the fertilizing effects of a Bermuda grass sod of long standing, the following results, obtained by Colonel A. J. Lane, in Hancock County, are given :

"The first year after the Bermuda sod was broken he harvested 1800 pounds of seed-cotton per acre; the second year, 2800 pounds per acre. The third crop was corn, manured with cotton-seed in the usual way and quantity; yield, 65 bushels per acre. The fourth year he harvested 42 bushels of wheat per acre. Neither the cotton nor wheat was fertilized.

"Mr. J. F. Madden, this year (1876), produced on 1 acre, in Spalding County, 137 bushels of oats.

"Captain E. T. Davis, of Thomas County, produced in 1873 96½ bushels of rust-proof oats per acre. After the oats were harvested he planted the same land in cotton, and gathered 800 pounds of seed-cotton per acre.

"Mr. T. C. Warthen, of Washington County, produced in 1873, on 1.1125 acres, 6917 pounds of seed-cotton, equivalent to 5 bales of 461 pounds each, worth at the average price that year—17½ cents—\$403.37, which, less the cost,—\$148.58,—gives a net profit of \$254.79 for the above area—a very small fraction over 1 acre.

"Mr. R. M. Brooks, of Pike County, produced in 1873, on 5 acres of bottom-land, 500 bushels of rice, at a total cost of \$75, giving a net income of \$300 on 5 acres.

"Mr. John J. Parker, of Thomas County, produced in 1874, on 1 acre, 694½ gallons of cane syrup, worth, at 75 cents per gallon, \$520.87; total cost of production, \$77.50; net profit, \$443.37.

"Mr. J. R. Winters, of Cobb County, produced in 1873, on 1.15 acres, 6575 pounds of dry clover hay at the first cutting of second year's crop.

"Mr. R. B. Baxter, of Hancock County, harvested at the first cutting, first year's crop, 1872, from land which had been covered with a complete sod of Bermuda grass for many years until a few years of seeding to clover, 4862 pounds of dry clover hay per acre.

"Dr. T. P. Janes, of Greene County, produced in 1871 5 tons of clover hay per acre in one season,—two cuttings.

"Mr. Patrick Long, of Bibb County, harvested in August, 1873, on an acre of land from which he had

gathered a crop of cabbages in June of the same year, 8646 pounds of native crab-grass hay.

"Mr. S. W. Leak, of Spalding County, gathered in the fall of 1873, on an acre of land from which he had harvested, in June, 40 bushels of wheat, 10,726 pounds of pea-vine hay. This acre yielded in wheat a net profit of \$66 in June, and the following fall in pea-vine hay \$233.08, making in one year a net profit from 1 acre of \$299.08.

"Mr. L. B. Willis, of Greene County, harvested in June, 1873, from $1\frac{1}{2}$ acres of land, 20 bushels of wheat, and the following October, 27,130 pounds of corn-forage. From the forage he received a net profit per acre of \$159.22.

"Mr. R. Peters, Jr., of Gordon County, harvested in 1874, from 3 acres of lucerne, four years old, 14 tons and 200 pounds of hay, or 9400 pounds per acre. This land was mowed four times,—viz., May 17, July 6, August 3, and September 30.

"Dr. W. Moody, of Greene County, harvested at one cutting, from an acre of Oconee River bottom, in 1874, 13,953 pounds of Bermuda grass hay, at a total cost of \$12.87, worth, at $1\frac{1}{2}$ cents per pound, \$209.29, a net profit per acre of \$196.42.

"Captain C. W. Howard produced on Lookout Mountain, Walker County, in 1874, on fresh land which cost him 25 cents per acre, 108 $\frac{1}{2}$ bushels of very fine Irish potatoes, with one hoeing and one ploughing, the whole cost of production per acre being \$11.25; net proceeds of 108 $\frac{1}{2}$ bushels sold in Atlanta for \$97.25. While this was not a large yield under favorable circumstances, it was a very fine yield for freshly-cleared, unmanured land, and the expense incurred in their production, and illustrates the feasibility of Northern Georgia (a large portion

of which equals Lake County, Ohio, for the production of the Irish potato, without the risks of the northern section) producing potatoes enough to supply all of our markets during the winter. The mountains and valleys of Northern Georgia are admirably adapted to the production of Irish potatoes and cabbages, with which our cities have generally been supplied from States north of us.

"Mr. John Dyer, of Bibb County, produced in 1873, on 1 acre, at a cost of \$8, 398.7 bushels of sweet potatoes, which, at 75 cents per bushel, gave a net profit per acre of \$290.92.

"Dr. J. S. Lavender, of Pike County, in 1873, produced on 1 acre 1552 bushels of turnips.

"The following illustrates what may be made by diversified farming properly conducted :

"At the Fair of the Georgia State Agricultural Society in 1874, a premium of \$50 was awarded to Mr. Wiley W. Groover, of Brooks County, for best results from a two-horse farm. His farm consisted of 126½ acres, on which crops to the value of \$3,258.25 were produced that year. Total cost of production, \$1045; net proceeds, \$2,213.25. No guano or other commercial fertilizers were used on this farm that year, or for five years preceding. The crops cultivated were oats, corn, peas, ground-peas, sweet potatoes, sugar-cane, and cotton. The stock reared on the farm that year was not included in the schedule of products.

"While the foregoing are exceptional cases, far exceeding the usual results, they serve to illustrate the capacity of Georgia soil when fertilized and properly cultivated, with brains applied under the guidance of science.

"Agriculture was formerly regarded as a mere art, empiric in all its branches. Now it is generally recognized in Georgia as an applied science. The old prejudice

against 'book-farming,' as that to which science has been applied is called, is rapidly giving way to enlightened progress. The truths eliminated by scientific research are now eagerly appropriated by the advanced agriculturists. Our agriculture is on the ascending scale, and the time is not far distant when such results as those given will be common occurrences.

"STOCK-RAISING IN GEORGIA.

"The same obstacle which has been in the way of every other diversified interest in Georgia—viz., cotton-culture—has seriously militated against the bestowal of proper attention upon raising stock. It is true stock has been, all things considered, successfully raised in every section of Georgia,—not because proper attention has been bestowed upon them, but because the climate and vegetation have so favored their growth as to make them profitable in spite of gross neglect.

"The results given under the head of 'Improved Culture' demonstrate the fact that in all sections of the State abundant forage crops can be raised for every description of stock.

"HORSES AND MULES.—The results of inquiry made of the farmers in 1875 demonstrate the fact that horses and mules can be raised in Georgia at half what they cost when purchased from the West. Not only this, but those raised in Georgia are notoriously more hardy and serviceable than those bred further North.

"But little attention has been given to breeding horses and mules, because of the absorbing influence of cotton-culture, which prevented attention to pasture-lands; indeed, Georgia, with the exception of the northern portion, has always been essentially a *planting* region. The difficulties of the labor problem are now compelling land-owners

to look to stock as a solution to this knotty question, since less hired labor is required, and consequently less expense and vexation attend it than planting.

“CATTLE.—There has been but little attention given to the improvement of the breed of cattle in the State, and insufficient care given even to the common stock. The whole available force of the larger portion of the State has been engaged in the destruction of grass for the last century, and yet it still grows. One tithe of the effort that has been bestowed upon the destruction of grass would clothe our fields with such a carpet of verdure as would render Georgia the finest stock-region on the globe.

“The very large breeds of cattle are not adapted to the Middle and Southern portions of Georgia, but the smaller breeds—Jersey, Ayrshire, and Devon—are admirably adapted to all sections of the State. The cross of the short horn on the native stock does well where sufficient pasturage is afforded; but the above breeds all succeed well, either pure or as grades resulting from their cross upon the native.

“In much the larger portion of the State, cattle may subsist upon green food throughout the year. In many sections there are cane swamps which afford excellent natural pasture all winter. Small grain sown early in the fall affords abundant pasturage through the winter, and is not materially injured by being grazed during moderately dry weather. Oats, rye, and barley may be thus pastured, if sown in August or September, and yet produce abundant harvests the following summer. They may be pastured until the middle of February or first of March, according to the latitude and elevation. The heaviest crops of oats that have been made have generally succeeded winter-grazing. Any farm, by proper manage-

ment, may afford green pasturage for stock during the larger portion of winter.

“Besides the pasturage which small grain crops afford, there is no difficulty in securing abundant crops of cultivated or natural grass for hay or pasture. The field-pea, which grows so luxuriantly on all of the sandy soils of the primary, cretaceous, and tertiary formations, supplies the place of clover which thrives on the more elevated clay and clay-loams of Middle and Northern Georgia.

“The most valuable and reliable grass, and one which is destined to aid largely in revolutionizing the system of agriculture in the cotton belt of Georgia, as well as to renovate the worn hills, is the Bermuda,—perhaps the most valuable pasture grass in the world, surpassing, in nutritive properties and compactness of sod, the famous Blue Grass of Kentucky, having, according to the analysis of Dr. Ravenel, 14 per cent. of the albuminoids. A Bermuda grass sod, properly managed, will afford excellent pasture for cattle for nine months and for sheep the entire year. There will be but little demand for dry forage in Middle and Lower Georgia, such is the mildness of the climate and the character of the spontaneous growth; but there is no difficulty in supplying excellent dry forage in any desired quantity and at very small cost.

“Lucerne, being perennial, is perhaps the most economical for green soiling or for hay, since it can be cut so early in the spring, and so frequently, and ranks so high in nutrition and in soil improvement; but corn forage, the various millets, clover, native grasses, and pea-vine hay, as well as Bermuda grass hay, can all be saved, of excellent quality and in large quantity, for winter use, when necessary.

“Cotton-seed, steamed or boiled, and mixed with cut hay and turnips, affords a cheap and excellent food for milch-cows.

"There is no market, as yet, for milk, except for that produced in the vicinity of cities; but the manufacture of butter is very profitable to the extent of supplying the demand of non-producers in the State. What is known as wire-grass affords fine spring pasture in the pine forests of Southern Georgia, where the largest herds of cattle and sheep are kept, little more care being taken than to gather them up once a year for marking.

"SHEEP.—There are few sections of the world in which sheep can be raised more profitably than in Georgia. When the value of Bermuda grass is appreciated by the farmers, and the thin and rolling portions of their farms are clothed with it, which seems to have been intended especially for sheep, Georgia will sustain a sheep for every acre of territory; and thirty-seven million of sheep would be worth to their owners, in the aggregate, thirty-seven million dollars net per annum, nearly double the present gross value of the cotton-crop of the State.

"Like other stock, sheep have, thus far, received very little attention, but have been so favored by climate and vegetation as to pay, even under our neglectful system, an average of 63 per cent. per annum net profit on the investment, the average cost of raising a pound of wool in the State being only six cents, and the net profit on each pound being twenty-seven and one-third cents.

"Mr. David Ayres, with thirty-five hundred sheep, of common stock, which range on the wire-grass of Southern Georgia without a shepherd, makes an annual profit of 90 per cent. on his investment and labor, the latter consisting only in marking and shearing.

"Mr. Robert C. Humber, with the cross of the merino on the common stock, makes a clear profit per annum of 100 per cent. on his investment and labor. His sheep

have a Bermuda grass pasture, and receive no attention, except regular salting.

"The sources of pasturage mentioned under the head of cattle are equally available for sheep.

"Only a few experiments have been made with soiling sheep on turnips. Mr. David Dickson herded his sheep on several acres of turnips, and gathered the next year four thousand pounds of seed-cotton per acre, an increase of three thousand pounds per acre as the effect of folding.

"There has never been a fair experiment in sheep-raising in Southern Georgia, combining proper attention to the flock, a judicious selection and crossing, with a reasonable provision for the best development of frame and fleece. There has been but one in North Georgia. Mr. R. Peters has given stock-raising, generally, very thorough attention, with satisfactory results both as to the stock and the incidental improvement of the soil, the capacity of which for pasturing purposes has increased tenfold in twenty years. Mr. Peters is now breeding with most satisfactory results the pure Angora goat, which will, when properly understood and appreciated, be extensively bred in all the mountain and hill country of the State.

"Hogs.—The peculiar adaptation of our climate and soil for the production of roots, tubers, and other crops that may be harvested by the hog, renders the raising of this important food-animal both easy and cheap. The only difficulties in the way of the production of an abundant supply of pork in Georgia are found in the ravages of cholera and thieves, and the indisposition of the farmers to plant crops for the especial benefit of the hog, and to give other proper attention. The removal of the last two obstacles would to a large extent, if not entirely, remove the first two. With proper attention to the production of such crops as the field-pea, ground-pea, chufa,

sweet potato, and small grain, with the addition of clover on soils suited to its growth, pork can be raised in Georgia as cheaply as in any part of the United States, and almost without consumption of corn, except to harden the flesh for a short time before killing.

"POULTRY.—There are no obstacles to successful poultry-raising in Georgia, except the indisposition of the people to give proper attention to food and range. With Bermuda grass for summer and small grain pasture for winter, they can have the necessary green food throughout the year. The field-pea and chufa, with a small admixture of the varieties of small grain, will afford ample supply of grain, while there is, with the exception of a few months, an abundant supply of animal food gathered from the range in the form of bugs and worms. There has been some cholera, but this has been generally prevented by equalizing the supply of animal and vegetable food consumed by the fowls throughout the year. This is easily done by supplying grain in spring and summer to neutralize the effects of a surplus of animal food, and meat in winter to supply its deficiency.

"Nature has liberally supplied everything that climate and soil can contribute to successful stock, or poultry-raising in Georgia. The difficulties to be overcome do not arise from the *country*, but from the *habits of the people*."

CHAPTER XIII.

Climate and Health of Georgia.

PERSONS seeking homes in Georgia can select any climate which they may prefer. If they prefer a cool, bracing atmosphere, they can find it in the lovely valleys that nestle at the foot of the mountain ridges of Northern Georgia. If a climate yet milder is preferred, it can be had amid the hills of Middle Georgia; or in the southern section of the State one can find a region where winter scarcely comes ere it is gone again.

The following letter from Dr. Wm. H. White, formerly surgeon of the First and Twenty-Second Iowa Volunteers, but for many years since the war a resident of Atlanta, will be found interesting. It speaks particularly of the climate of North Georgia, and is certified to by several leading physicians:

"ATLANTA, ———.

"GENTLEMEN,—North Georgia is about eleven hundred feet above the ocean, as recently demonstrated by Captain Boutwell, of the United States Coast Survey. The atmosphere is invigorating, and not subject to marked unexpected changes, as will be seen by the following meteorological table, taken from the official records of the military post at this place:

From July, 1873, to December, 1875, in- clusive.	Highest and Low- est Temperature each month.		Monthly Aver- age each 24 hours	Rainfall in inches.	Humidity.
MONTH.	MEAN.				
1873.	°	°	°		
July.....	93	63	78.78	.87	85.50
August.....	97	56	77.70	.08	76.00
September.....	96	52	72.38	5.40	73.00
October.....	86	21	59.12	1.23	78.00
November.....	75	20	47.30	3.15	68.00
December.....	73	15	42.20	2.41	70.00
1874.					
January.....	69	12	42.70	3.14	78.00
February.....	74	22	44.80	6.86	77.00
March.....	78	27	52.06	7.38	73.00
April.....	79	34	57.78	10.42	70.00
May.....	95	46	70.10	3.00	58.00
June.....	95	59	77.50	7.00	69.00
July.....	94	64	77.70	4.70	75.00
August.....	98	58	76.88	10.00	71.06
September.....	91	47	72.00	.47	67.22
October.....	87	25	61.40	.80	56.46
November.....	79	23	53.11	3.19	50.55
December.....	74	23	45.02	3.00	43.83
1875.					
January.....	68	4	38.56	5.60	38.82
February.....	69	7	42.18	6.92	39.36
March.....	77	24	55.51	10.27	48.47
April.....	81	27	57.96	4.79	53.28
May.....	94	40	69.50	1.77	63.24
June.....	99	55	77.05	3.98	71.03
July.....	99	66	81.22	4.04	75.65
August.....	91	60	75.19	3.02	71.41
September.....	97	44	70.18	4.24	65.56
October.....	82	28	57.10	2.08	53.48
November.....	80	24	53.71	3.76	51.11
December.....	75	66	49.86	3.75	48.14

"It will be observed that our coldest day in 1873 was 15° above zero, in 1874, 12° above, and in 1875, 4°, making our mean winter weather about 45° above zero; the mean heat of summer about 75° above, which is an average of from ten to fourteen degrees less than that of the Middle and Western States; while our atmospheric changes

at all seasons are more gradual and less extreme, and, as a rule, a quilt or a blanket is required summer nights.

"We are not subject to epidemic diseases. Not even in Atlanta, with a population of thirty-six thousand, with daily arrivals from all sections, has yellow fever or cholera ever prevailed, and but few cases of dysentery or small-pox have been developed. As to chills and fever, when they have occurred (as a rule), the cause could be traced to a visit to, or former residence in, some miasmatic district. This *bracing* atmosphere oxygenates the blood without oppressing the breathing apparatus, and is, therefore, peculiarly adapted to persons from a northern or more rigorous climate—especially those suffering with chronic weakness of the lungs. In the winter months we have some rainy weather, requiring the usual precautions against these atmospheric changes.

"Having passed my early life in New York, practising my profession in the Northwest for fourteen years, and being stationed in and having passed over most of the South during the war, I have had opportunities of experiencing and observing the climatic effects of the several portions of the United States, rarely enjoyed. My conclusion is that the climate of North Georgia, taking all seasons together, is the finest in America; and this is the opinion of all intelligent travellers I have ever met.

"I have found that pleurisy, pneumonia, catarrh, and all affections of the respiratory organs are rare here, as compared with those generally met with in the North and West: so with epidemic and typhoid forms of fevers. I have also found that persons coming from those sections suffering from any weakness of the lungs, or catarrh, or a tendency to consumption, or suffering general nervous prostration, be the cause what it may, are almost certain to be benefited—yes, get well—by coming to this region

of country. As illustrative of this fact, there are hundreds of *old* citizens and old persons in North Georgia enjoying, and who have enjoyed, good health, who came here years ago as a last resort, and they were believed by their friends to be consumptive. I can but think that these marvellously pleasant results are owing, in part, to the vast number of mineral springs which are everywhere to be found in Upper Georgia.

"We have long been satisfied, and we believe results warrant us in saying, this section of country is far better for invalids than that of Florida, as it is less liable to sudden changes, free from unpleasant, depressing ocean- and gulf-breezes, loaded, as they are, with the chloride of sodium absorbed from the salt waters, and miasm of its vast swampy bottoms and marshes; and, above all, there is constant want of a *bracing strength-giving atmosphere*. I also say, without intending to detract from the reputation of Aiken as a noted and fine winter home for Northern invalids, that I can but think, and that others must, when the fact is considered that we are five hundred and fifty feet higher than that city, and free from its fine white sand, which fills the nose and air-passages every time the wind stirs it, that ours is decidedly the safest and best for this class of persons. For years past, Atlanta, Marietta, Stone Mountain, Athens, etc., have been the summer resort of many persons from the southern portion of this State, Alabama, Florida, and Louisiana, and, during the last season, of many Northern persons. Lassitude and languor are not experienced here, even as much so as in many portions of the North.

"I am not practising, but shall be glad to extend any courtesy to Northern visitors.

"WM. H. WHITE, M.D.,

"Late Surgeon First and Twenty-Second
Iowa Volunteer Infantry."

"We fully concur with Dr. White as to what he has stated in the above letter, as to epidemics, chills and fevers, as to our climate and its effects generally on persons coming from the North.

"H. V. M. MILLER, M.D.

"W. G. OWENS, M.D.

"R. B. RIDLEY, M.D.

"A. M. CALHOUN, M.D.,

"Professor Atlanta Medical College.

"J. T. TODD, M.D.,

"Vice-President Atlanta Academy of Medicine.

"WM. ABRAM LOVE, M.D.,

"Professor Atlanta Medical College.

"W. F. WESTMORELAND, M.D.,

"Professor Atlanta Medical College.

"G. G. CRAWFORD, M.D.

"CHARLES PINCKNEY, M.D.

"H. B. LEE, M.D."

The Sand Hills, two and a half miles from Augusta, in the extreme eastern part of Middle Georgia, on whose summit stands the pretty town of Summerville, are a continuation of the same ridge on which Aiken, in South Carolina, is situated; hence the same causes which make Aiken such an excellent resort for invalids from the North, render Summerville an equally healthy abode for such persons. Summerville possesses one great advantage over Aiken in its proximity to Augusta, which city the invalid can reach by a short ride on the street railway, and there he can procure many comforts that cannot be obtained in the town of Aiken. Summerville was originally only a summer resort of the wealthy citizens of Augusta; but many of them, pleased with its healthful and bracing winter air, have made it their permanent abode. It is regu-

larly laid out with broad streets shaded by elms and other trees, and contains many handsome residences surrounded by lovely gardens. The population of the town is about one thousand. The views from the various prominent points in the town are very fine ; that from the plateau, on which stands the residence of Colonel Milledge, is especially so, and this spot would be a splendid site for a first-class hotel. There can be no doubt that an enterprise of this character would pay well, for during the winter and spring months there have been hundreds of unsuccessful applicants for accommodation at the few houses open for the reception of boarders. Such a hotel would attract to Summerville many of those who now resort to Aiken to avoid the bleak climate of the North. With regard to the healthfulness of these Sand Hills and the country adjacent, including the city of Augusta, I cannot do better than give several extracts from a little pamphlet, by Dr. S. E. Habersham, on the "Hilly Pine Region of Georgia and South Carolina," published in Augusta, in 1869. Speaking of the Sand Hills, he says, "This plateau is, properly speaking, the true summit of the hills in this State, being the highest point attained by it, and on its eastern terminus is situated a portion of the village, including the United States Arsenal and grounds. The gradual slope of this plateau to the south and east, the sandy nature of the soil, with the pine and oak growth (blackjack), make it extremely dry and well adapted for those pulmonary sufferers who require a very dry climate and low dew-point ; while the sides of the ridge being nearer the valley are better adapted to those for whom a semi-humid atmosphere is necessary. This condition can be increased or diminished by approaching to or receding from the valley, which fact makes the village of Summerville more suitable as a residence for the pulmonary suf-

ferer than any locality I am aware of, since it is well known that though the great proportion of phthisical patients require a dry climate, yet there are occasionally those who are benefited by a comparatively humid atmosphere. This is particularly the case with asthmatic patients, who, in the great majority of cases, are benefited by residing here. As this peculiarity of constitution can only be determined by actual experiment, we have, in the close proximity of these two hygrometrical conditions, an easy and convenient means of determining the fact."

In the pamphlet from which I have just quoted, I also find the following letter from Dr. L. A. Dugas, one of the most prominent physicians of Georgia. The letter is addressed to Dr. Habersham, and dated January 2, 1869:

"DEAR SIR,—In a note recently received from you, I find the following request: 'Will you do me the favor to give me the results of your experience and observation as to the influence exerted by this climate upon tubercular consumption and kindred diseases?' I will endeavor to make my reply as brief as possible.

"Having commenced the practice of my profession in 1831, after spending several years in preparing myself for it in the colder sections of our country and in Europe, where tubercular affections and typhoid fever constitute a great majority of the cases treated in hospitals, I was very soon forcibly impressed with the rarity of those diseases in this section, in comparison with what I had seen elsewhere. Indeed, some six or seven years elapsed before I saw the first case of genuine typhoid fever, when this form of fever first began to show itself here. I need scarcely add that since that time typhoid fever has gradually invaded and extended over all the Southern States. Tuberculosis, in its various forms, and especially phthisis pulmonalis, was scarcely ever seen, except in those who

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fled from the North in order to escape it, and among the negroes imported from Maryland and Virginia, where they had inherited the tendency. Such a radical change in the field of my observation could not fail to attract my attention, and to impress me as before stated.

"In 1836 I had occasion to examine the mortuary records of the city sexton as far back as they could be found, for the purpose of preparing an article on the subject for the *Southern Medical and Surgical Journal*, published in this city. The result of this, as well as of subsequent researches, furnishes a striking confirmation of the correctness of my impressions.

"It seems to me that the best test of the influence of climate upon the development of tuberculosis must be found in the relative frequency of such cases among the natives of this and of other sections who remain at home. Judged by this standard, it will be readily ascertained that, while phthisis pulmonalis is very common in our Northern States among the natives, it is quite rare here among our own people. I know of very few native families in Augusta who have ever suffered from consumption, and these have only lost one or two members by it. I doubt that there are exceeding ten families who have been thus even partially affected within my recollection.

"Again, if we confine our observation alone to those who have emigrated from the north of the United States and from Europe, it will be found that, although many bear with them the hereditary taint, comparatively few will experience its fatal development. The conclusion is, therefore, irresistibly forced upon us that this climate does exert a most beneficial influence over this class of affections.

"Is there any difference in the several sections of Georgia with regard to this comparative immunity from

phthisis?' There is a marked difference. I find that in 1852 I made the following remarks in an editorial article of the journal above alluded to (p. 636):

"The value of removal to the South of persons affected in the Northern States with consumption has been heretofore very generally admitted; but it is now asked whether much, if any, advantage is to be derived from spending merely the winter months at the South, and returning to the North in the spring; and it is added that if a temperate atmosphere be all that is needed, this may be obtained in New England by means of a well-regulated system of artificial heat. We believe it to be an error to suppose that the Southern States owe their immunity from phthisis alone to the mildness of their winters. If such were the fact, all mild climates ought to be equally exempt, and all cold latitudes alike unfavorable. Yet phthisis is much more common upon the seaboard and in the mountainous districts of the Southern States than at intermediate points, and it is comparatively rare in the northern portions of Canada and Russia, whilst it makes frightful havoc in milder England, France, and our Northern States.

"That a temporary sojourn in the Southern States is advantageous, we doubt not; but that a permanent residence is still more so, we feel quite certain. Every practitioner of experience, and who is acquainted with the means of accurately determining the state of the lungs, must have often observed how wonderfully large abscesses will heal here, which would have certainly proved fatal in a less genial climate. The writer knows persons in this State who had tubercular abscesses as long as twenty years ago, which healed kindly, and have left them ever since in the enjoyment of apparently good health. That all are not equally fortunate, is too true; yet we feel as-

sured that it is only by remaining in the South, both summer and winter, sufficiently long to acquire the peculiarities of a Southern constitution, that lasting benefit may be expected. The best locations are obviously those in which the disease *originates* most rarely, and these are unquestionably to be found midway between the mountains and seaboard.

"This favored belt commences at the termination of the primitive region, where the rivers of the Atlantic slope tumble over the last ledges of granite rocks,—that is to say, at Augusta, Milledgeville, Macon, and Columbus,—and varies from thirty to sixty miles in width below the shoals.

"The so-called Sand Hills, with pine forests which characterize this belt, are only a few hundred feet above the sea; are supplied with pure water, and have a healthy atmosphere, peculiarly adapted to those threatened with or suffering from pulmonary disease. I must say, however, that some cases do better in the valley of Augusta than upon the adjacent heights, and *vice versa*. Why this is so I cannot determine.

"Yours, very truly, L. A. DUGAS."

This testimony of Dr. Dugas is fully corroborated by that of other prominent physicians of Augusta.

The meteorological register, kept by the officers of the medical staff at the United States Arsenal in Summerville, contains a series of uninterrupted daily thermometrical observations, made at sunrise, at nine o'clock A.M., three o'clock P.M., and nine o'clock P.M., for more than twenty years, including three of the coldest winters and hottest summers within the memory of the oldest inhabitants. These observations show the mean average temperature of the year to be 64° Fahr., and the mean monthly temperature to be as follows:

For January, $46^{\circ} 7'$ Fahr.
 For February, $50^{\circ} 7'$ Fahr.
 For March, $58^{\circ} 8'$ Fahr.
 For April, $65^{\circ} 1'$ Fahr.
 For May, $72^{\circ} 2'$ Fahr.
 For June, 79° Fahr.
 For July, $80^{\circ} 9'$ Fahr.
 For August, $79^{\circ} 7'$ Fahr.
 For September, $72^{\circ} 8'$ Fahr.
 For October, $63^{\circ} 5'$ Fahr.
 For November, $53^{\circ} 8'$ Fahr.
 For December, $46^{\circ} 3'$ Fahr.

The mean temperature for the four seasons is shown to be—for the spring, $65^{\circ} 3'$ Fahr. ; for the summer, $79^{\circ} 9'$; autumn, $63^{\circ} 4'$; winter, $47^{\circ} 9'$. The rainfall for the four seasons is—for the spring, 10.16 inches ; summer, 14.14 inches ; autumn, 6.95 inches ; winter, 5.92 inches. The mean number of fair days during the year is 238 ; cloudy days, 127 ; rainy days, 70 ; snow about two days in three years.

The following I also get from Dr. Habersham's pamphlet :

“Dr. Joseph Jones, in his topographical description of the country around Americus, in Sumter County, Georgia, published in the medical report of the United States Sanitary Commission, 1867, thus describes the sand hills of that part of the State :

“Andersonville (near Americus), with the surrounding hills, including the Confederate military prison, is elevated from three hundred and fifty to four hundred and thirty-five feet above the level of the ocean, and is situated in Sumter County, Georgia, between the Flint and Chattahoochee Rivers, seven miles due west of the former, and forty-two miles east of the latter, in about $32^{\circ} 10'$

north latitude, and $38^{\circ} 26'$ west longitude, near the commencement of the western slope of the dividing ridge between the streams flowing southwesterly into the Gulf of Mexico and those flowing southeasterly into the Atlantic Ocean.

“Fort Valley, twenty miles northeast of Andersonville, at an elevation of five hundred and thirty feet, lies upon the west of the ridge running between the Ocmulgee and Flint Rivers; the former, uniting with the Oconee and forming the Altamaha, empties into the Atlantic Ocean, and the latter, uniting with the Chattahoochee and forming the Apalachicola River, pours its waters into the Gulf of Mexico. From this dividing ridge the country slopes towards the Atlantic on the southeast, and towards the Gulf of Mexico on the southwest.

“The summit of the hill at Andersonville, upon which the Confederate States General Hospital has been located, is four hundred and thirty-five feet above the level of the sea, and, according to the railroad survey, is next to the highest point on the railroad between Oglethorpe and Albany,—the highest point between them being about four hundred and eighty and six-tenths feet. High table-land, with an average elevation of about four hundred and sixty feet, lies between Andersonville and Americus, the highest being four hundred and eighty and six-tenths feet.

“The following are the elevations above the level of the sea at several points above Andersonville: railroad depot, three hundred and ninety-nine feet; hill opposite depot, four hundred and eighty feet, etc. The hills of this rolling country in and around Andersonville vary in height from forty to one hundred and eighty feet above the level of the water-courses.

“This region, as above described by Dr. Jones, ter-

minates the Sand Hill region in Georgia on its western boundary."

From a small guide to South Georgia and Florida, published by the Gulf Railroad, I have been granted the liberty of making the following extract on the inducements to tourists, health-seekers, and immigrants:

"GEORGIA.

"For home comfort and abundance, no country is better suited, if one will but make them a prime object. Germans and other foreigners have frequently remarked on the advantage of winter crops, and the ground working for them all the time, and not being ice-bound in winter.

"Increased population would rapidly lead to diversification of pursuits, which again would rapidly develop the needed capital from within, if not from abroad; and we do not hesitate to say, as the result of observation and experience, that the best immigration is the immigration from the Northern States, or domestic, rather than from abroad, or foreign. These are soonest assimilated. The best means of harmonizing the sections is by the mutual acquaintance to which such immigration will give rise. Sectional antipathies are based on mutual ignorance, and disappear before knowledge.

"Come and see for yourselves. Do not expect fairyland, or exemption from labor and care, but come and compare climate, productions, and the general conditions of comfort with those to be had elsewhere, and you will find them to compare favorably. You will quickly see that we have not improved our natural advantages adequately, but you will find that nature has done her part well; and if you but bring with you good habits of painstaking and economy, you will soon build up a delightful home. You will find good sense and good feeling, and,

in any considerable community, men of culture and refinement: still, generally, they do not show so well at first as on longer acquaintance.

“You should visit the country, and see the capacities of the soil and climate. Do not regard the present agriculturists as knowing everything, nor yet fall into the contrary error of supposing they know nothing: in fact, they know much; yet the present is but a transition state, and they have not fully solved the problem of conformity to the new conditions of life and labor. The young men and the new men are now on an equal experience-level with the old, so you will have a fair start.

“The inducements generally referred to are agricultural. Those for manufacturers are equally great. For success in these, nothing is needed but capital and good management; and where will they thrive without both? All the needful conditions are here for the development of the most profitable manufacturing industry in the whole country. Climate, material, and power all exist together in an unsurpassed condition.

“Professional men we do not need so much as men of science and skill. Our people have, themselves, devoted much more of their time to other subjects than to science or to expertness in labor.

“We think South Georgia and Florida, all things considered, the most desirable of all the sections open for immigration, and still inadequately populated. In all lands there are sickness and death, hard times, evil days and evil people, mixed with the blessings and the good things of life. Trouble and discipline, labor and sorrow, are incident to all climes; yet nature has been provident in her gifts to us, and man needs only an average care and skill to make here as happy homes as the world has ever known. The earth, with its range of productions, the

sun and air and conditions of climate, the abundant wood and water and water-power, the present settled state of the country and degree of development, and the future promise for one's children of a still higher development, all point to the South as admirably suited for immigration, and to no part of the South more than to South Georgia and Florida.

"CLIMATE.

"ADVANTAGES OF OUR CLIMATE.

"DR. C. H. HALL, Macon, Ga. :

"*Dear Doctor*,—Your letter in reference to 'catarrh' and the advantages of this climate in that disease and phthisis has been received. I am glad that inquiry in reference to the prevalence of 'catarrh in the pine belt' has been made. It is a disease so seldom seen or heard of here, that no special reference has been made to it by those who have written or spoken of the advantages of our climate in pulmonary disease. In my report, read before the Medical Association of Georgia on the adaptability of the climate of the pine forests of South Georgia to the consumptive, I gave it as my opinion that no region of country on the continent was more exempt from all diseases of the respiratory organs, among which I included 'catarrh.' I located here in January, 1864, and have been engaged in practice ever since. During this period of thirteen years I have been called upon to treat but two cases of nasal catarrh. The Hon. James L. Seward, whom you know to be a close observer, not only in matters of law, but in everything concerning the health and general welfare of the people with whom he has long mingled, informs me that he has been a resident of this place forty-nine years, and during that time he has rarely

heard of nasal catarrh, the disease to which you refer in your letter. If there is a disease from which we are more than any other exempt in the pine belt, it is nasal catarrh. We have now located here several gentlemen from the Eastern and Western States, who have been entirely cured of that disease by a change of residence. Among these is Dr. A. Frost, of Seymour, Indiana. He had suffered for years, and on removing here was speedily cured. These cases have evidently been cured by our equability of temperature and the inhalation of the pine aroma. This would indicate the therapeutic influence of the oil of turpentine by atomization in that troublesome and often intractable complaint. Our exemption here is in striking contrast with its prevalence in the elevated lands of Colorado, Minnesota, Nebraska, and New Mexico. If we are to believe the published reports of eminent physicians in these regions, catarrhs—bronchial, nasal, and aural—are exceedingly common. In these regions of great altitude the highly rarefied condition of the air is productive of very sudden and very great vicissitudes in temperature,—the mercury falling in a few hours from thirty to forty degrees. This seems to account for the frequency of catarrhs. Where changes are so sudden and extreme, it is next to impossible for one to protect himself from the immediate impulse of the change from heat to cold, cutaneous transpiration is suppressed, and catarrhs result,—first general, affecting the mucous membrane of the nasal passages, antrums, and bronchia, and often ending in chronic nasal catarrh. Here we have none of these causes to contend with. Our altitude is three hundred and thirty feet above sea-level; we have no extreme vicissitudes of temperature; our mean temperature in winter is about 53° , and in summer about 83° , with the barometer at about $29\frac{1}{2}^{\circ}$, and we have the healing influence of the pine

forests. I apprehend that the word catarrh is not fully understood by all invalids. I have examined cases coming here for the cure of 'catarrh' whose voices entered my ear upon the chest through *cavities* which sealed their doom.

"In reference to the advantages of the piney woods climate in pulmonary diseases, I have expressed my opinion very fully in the report mentioned, but it may not be amiss, at your request, for me to refer to it in this place by way of comparison. 'Winter homes for invalids' have been a subject of discussion for hundreds of years, and you are aware how the profession have differed on the subject. I believe some points in this discussion have been definitely settled by the results of experiment and experience. These are—1st, that the consumptive should studiously avoid the dampness and irritating winds of the sea coast; 2d, that they should seek localities showing the greatest equability of temperature; and 3d, the climate affording the greatest number of fair days, during which the invalid may enjoy out-door exercise. In this locality we are secure against the first, with a close approximation to the second, and with very decided comparative advantage in the last. We are two hundred miles from the Atlantic, and sixty from the Gulf. Our mean temperature, as I have before stated, in winter is about 53°, and in summer about 83°. I made a careful note of the weather from 1st January last to the 17th May inclusive, with the following result: Total number of days, one hundred and thirty-seven; during that time it rained twenty-five times, there were eleven cloudy days, and one hundred and one fair days. You will see from this that the invalid here would have had, out of the one hundred and thirty-seven days, one hundred and twelve days during which he might have been all day out of

doors. I have before me the report of the thermometer for Thomasville and Santa Barbara, California, for the month of January, 1875, as follows :

"At Thomasville the monthly mean temperature was $55^{\circ} 50'$; highest temperature, 72° ; lowest temperature, 38° . Santa Barbara, monthly mean temperature, $53^{\circ} 50'$; highest temperature, 70° ; lowest temperature, 38° . In temperature, you will perceive, we have the advantage of Santa Barbara; while in the number of fair days, so important to the welfare of the consumptive, we know of no region of country that can report more favorably. Santa Barbara has quite a reputation as a winter resort for invalids. Distance sometimes lends enchantment to the view. For some years past some of our brethren, conceiving the idea that altitude was the great desideratum in consumption, have sent their patients into the elevated regions of Minnesota, Colorado, Nebraska, and New Mexico. While I do not question the purity of their motives, I must say that in many instances they have been inconsiderate, if not derelict in their duty to their patients. None of us, however, are infallible in diagnosis, and we are willing to put a charitable construction upon their motives. I am aware that some, perhaps many, may differ with me, but I am not willing, in a matter of such vital importance, to withhold from the public an honest opinion through fear of opposition or criticism. I am prepared with irrefutable evidence from the various localities named to establish the correctness of the views expressed.

"Persons of phthisical diathesis—predisposed to phthisis—*may* be sent into those regions of great altitude with advantage. There the diminished barometric pressure will increase the number of respirations, and may thus develop the vital capacity and functions of the lungs. But

after the development of tubercular or caseous deposit, and particularly after the occurrence of vomicae, it must be decidedly injurious, if not eminently fatal. Why? Because the vital capacity of the lung is already seriously impaired, and the more frequent the respiratory acts the less chance is there for healing the lesions. You are aware that there are no more prolific causes of pulmonary hemorrhage than sudden and extreme vicissitudes of temperature and diminished barometric pressure. The first class of cases may be benefited by altitude, but for the second class it is full of danger. The lungs of the first *may* require exercise, those of the second *must* have rest. To find rest they must avoid high altitudes; they must avoid the sea-shore, with its bleak and irritating winds and excessive humidity. And to do this there is no safer place for them than in the interior pine forests of Southern Georgia, where they can inhale freely the aroma of the pine, with the barometer at 29° 30' instead of 23°, and where eighteen respirations per minute, instead of thirty-six, will be adequate for the supply of oxygen to the blood and tissues. The proportions of nitrogen and oxygen in the air we breathe are constant throughout the world in all latitudes and altitudes. Notwithstanding this immutability in the constituents of the air, there is a very decided and essential difference in that breathed in low and high altitudes. In high altitudes, on account of its rarefied condition, the atoms composing it are separated in proportion to its rarefaction, and hence a much greater volume must be inhaled to give the same weight and attain the same end. If we take a consumptive from a locality with an elevation of three hundred feet and a barometric range of twenty-nine or thirty inches into one with an altitude of five or six thousand feet and a barometric range of twenty-three inches, we subject him to the pain-

ful alternative of either respiring thirty-six times per minute, or with each inspiration to take in forty cubic inches of air instead of twenty, which is the normal amount with lungs of healthy vital capacity at the sea-level. His first effort would result in hemorrhage and death; his second would be impossible. We might just as well expect the blacksmith to keep up a proper heat in his forge with a leaky bellows.

"Last year the following item appeared in a Colorado newspaper: 'Six human bodies in metallic caskets were shipped yesterday on the Kansas Pacific Railroad. To offset this, *nine invalids* arrived last night.' Here is a commentary upon 'high altitudes' for consumptives. I trust you will not accuse me of keeping up the climate of the 'pine belt' as a 'cure-all' for phthisis. Such is not my intention. Such a climate has never yet been discovered, and he who shall be so fortunate as to find it will be as much, if not more, entitled to the gratitude of the human race and the monumental shaft to perpetuate his memory as the discoverers of ether and vaccine. I have simply endeavored to set forth the advantages of the climate in what I conscientiously believe to be its true light. Comparisons are said to be odious, but in this connection I do not so consider them. Now let me say that, of all the resorts for invalids known to me from observation or reading, I know of none which can be more honestly and strongly recommended than the 'pine forests' of Southern Georgia. In candor I must say that, whilst the consumptive is often materially benefited by a winter sojourn here, a change of residence, judging from observation of quite a number of cases, seems necessary for permanent relief. I do not wish to weary your patience, but I feel that I should conclude this letter with the following extract from 'Winter Homes for Invalids,' by Dr. Joseph W. Howe,

Professor of Clinical Surgery in the University of New York, in reference to the 'pine forests' of Southern Georgia:

"'Pine-grove localities have the reputation of being very healthy. There is usually complete freedom from malarial and pulmonary diseases. The atmosphere, impregnated as it is with the peculiar volatile principle of the trees, has a soothing effect on inflamed throats and irritable lungs. The air agrees with everybody. Invalids with troublesome coughs and shortness of breath rapidly improve after a short residence, and some far advanced in tubercular disease recover their health completely. The dryness and mildness of the atmosphere have, of course, something to do with the beneficial effects experienced, but there is no doubt whatever that much of the benefit arises from the air being impregnated with the piney odor.'

"Very respectfully, your obedient servant,
"T. S. HOPKINS, M.D."

No more healthy or delightful region can be found than the northern and middle sections of Georgia, and though there are some sickly localities in Southern Georgia, the greater portion of that section is healthy also. Even the southeastern part of the State, which is in many places hot and sickly, has large districts in which the people enjoy as good health as in any other part of the Union. Though Savannah was so terribly scourged in 1876, yet that was the first severe epidemic of yellow fever since 1854. Generally, Savannah is one of the healthiest of American cities. The interior of Georgia is entirely free from epidemics of yellow fever or cholera, and can be excelled by no section of the Union for salubrity of climate.

CONCLUDING REMARKS.

In conclusion, we would say that refinement and hospitality are confined to no section of the State. In the mountains and smiling valleys of Northern Georgia, amid the red hills of the middle belt, in the level and fertile region of Southwestern Georgia, from the seaboard to the Chattahoochee, in the rural districts, and in the cities, towns, and villages, may be found people whose homes are the abode of refinement and culture, and who, in virtue, intelligence, and unbounded hospitality, will compare favorably with any people anywhere in the world. To the industrious and hardy emigrants of the Old World they extend an invitation to come and help them build up a great and powerful commonwealth. To their fellow-countrymen of the North and West, who desire to find homes in a genial and healthy climate, they extend a hearty and cordial greeting. They offer them as good educational and religious privileges as can be found in any portion of the great republic, and as perfect security to life, liberty, and the pursuit of happiness.

Table showing the Population of each County and County Site by the Census of 1870, and the Average Value of Improved and Wild Lands, according to the Comptroller-General's Report for 1876; also the Railroad traversing each County.

COUNTIES.	POPULATION OF EACH COUNTY.			County Sites.	Population of County Sites.	Average value of improved lands.	Average value of wild lands.	RAILROAD TRAVERSING EACH COUNTY.
	White.	Colored.	Aggregate.					
Appling.....	4,110	976	5,086	Holmesville.....	*	\$0.59	\$0.15	Macon and Brunswick.
Baker.....	1,888	4,955	6,843	Newton.....	145	1.93	.27	Atlantic and Gulf.
Baldwin.....	3,844	6,774	10,618	Milledgeville.....	2,750	3.43	.10	Macon and Augusta; also a branch of the Central.
Banks.....	4,052	921	4,973	Homer.....	120	3.55	.72	Atlanta and Richmond Air-line.
Bartow.....	11,846	4,719	16,565	Cartersville.....	2,232	7.30	.46	Western and Atlantic; also the Cherokee Railroad.
Berrien.....	4,037	460	4,517	Nashville.....	95	1.10	.42	Albany and Brunswick.
Bibb.....	9,831	11,424	21,255	Macon.....	10,810	9.86	.19	Central; also Macon and Augusta, Macon and Brunswick, and Southwestern.
Brooks.....	4,111	4,231	8,342	Quitman.....	784	3.00	.32	Atlantic and Gulf.
Bryan.....	1,617	3,605	5,222	Eden.....	*	1.31	.60	"
Bullock.....	3,866	1,744	5,610	Statesborough.....	33	.88	.36	Central Railroad.
Burke.....	4,243	13,436	17,679	Waynesborough.....	843	2.95	.54	"
Butts.....	3,496	3,445	6,941	Jackson.....	*	4.16	.54	Albany and Blakely Extension of Southwestern Railroad.
Calhoun.....	2,026	3,477	5,503	Morgan.....	126	2.23	.41	"
Camden.....	1,458	3,157	4,615	St. Mary's.....	702	1.77	.39	"

* Population not given separately.

Table showing the Population of each County, etc.—(Continued.)

COUNTIES.	POPULATION OF EACH COUNTY.			County Sites.	Population of County Sites.	Average value of im- proved lands.	Average value of wild lands.	RAILROAD TRAVELING EACH COUNTY.
	White.	Colored.	Aggregate.					
Campbell.....	6,589	2,587	9,176	Fairburn.....	305	\$6.01	\$0.78	Atlanta and West Point.
Carroll.....	10,473	1,309	11,782	Carrollton.....	†	4.66	.58	Griffin and North Alabama.
Catoosa.....	3,793	616	4,409	Ringgold.....	316	6.11	1.12	Western and Atlantic, or State Road.
Charlton.....	1,496	401	1,897	Trader's Hill.....	†	.60	.06	Central Railroad; also Atlantic and Gulf.
Chatham.....	16,760	24,518	41,278	Savannah.....	28,235	9.12	.11	and the Charleston and Savannah.
Chattahoochee.....	2,654	3,405	6,059	Cusseta.....	216	2.61	.25	Athens branch of Georgia Railroad; also
Chattooga.....	5,399	1,503	6,902	Summerville.....	281	4.66	.44	Fort Gaines branch of Southwestern
Cherokee.....	9,117	1,281	10,399	Canton.....	214	4.14	.55	Railroad.
Clarke.....	6,488	6,453	12,941	Athens.....	4,251	6.19	.20	Macon and Western (branch of Central).
Clay.....	2,644	2,849	5,493	Fort Gaines.....	758	2.60	.57	Atlantic and Gulf; also Florida connec-
Clayton.....	3,734	1,743	5,477	Jonesborough.....	531	7.55	.59	tion of same.
Clinch.....	3,437	517	3,954	Homerville.....	†	.90	.15	State Road.
Cobb.....	10,593	3,217	13,810	Marietta.....	2,888	7.62	.55	Albany and Brunswick.
Coffee.....	2,514	678	3,192	Douglas.....	†	.50	.23	Georgia Railroad.
Columbia.....	4,086	9,449	13,535	Appling.....	†	3.66	.31	
Colquitt.....	1,517	137	1,654	Moultrie.....	†	.84	.21	

* Clarke also included Oconee County in 1870.

† Columbia also included McDuffie County in 1870. ‡ Population not given separately.

POPULATION OF COUNTIES, ETC.

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Coweta.....	7,856	8,019	15,875	Newnan.....	1,917	4,49	.38	Atlanta and West Point.
Crawford.....	3,284	4,273	7,557	Knoxville.....	223	2.58	.34	Southwestern.
Dade.....	2,788	245	3,033	Trenton.....	223	6.26	.33	Alabama and Chattanooga.
Dawson.....	4,032	337	4,369	Dawsonville.....	1,351	3.04	.07	Atlantic and Gulf.
Decatur.....	7,465	7,718	15,183	Rainbridge.....	401	1.28	.22	Georgia Railroad; also Atlanta and
De Kalb.....	7,352	2,662	10,014	Decatur.....	1,351	9.19	.70	Richmond Air-line.
Dodge.....	4,935	4,855	9,790	Eastman.....	1	1.25	.47	Macon and Brunswick.
Dooly.....	2,093	9,424	11,517	Vienna.....	2,101	2.64	.19	South Georgia and Florida (branch of
Dougherty.....	2,826	4,172	6,998	Albany.....	1	3.23	.33	the Atlantic and Gulf).
Douglas†.....	1,513	465	1,978	Douglasville.....	1	4.18	.26	Albany and Blakely extension of South-
Early.....	2,507	1,704	4,211	Blakely.....	61	1.62	.32	western Railroad.
Echols.....	4,386	4,863	9,249	Statenville.....	108	1.01	.52	Florida connection of Atlantic and
Effingham.....	4,431	1,793	6,134	Springfield.....	1	1.29	.32	Gulf.
Emmett.....	5,285	1,744	5,429	Elberton.....	108	3.86	.33	Central Railroad.
Fayette.....	5,683	2,538	8,221	Swainborough.....	1	8.4	.53	Elberton Air-line Railroad.]
Floyd.....	11,473	5,757	17,230	Morganston.....	1	1.67	.17	Augusta and Knoxville. Not finished.
Forsyth.....	6,862	1,121	7,983	Payetteville.....	1	2.07	1.01	Griffin and North Alabama.
Franklin.....	6,034	1,859	7,893	Rome.....	2,748	6.91	.50	Selma, Rome, and Dalton; Rome and
Fulton.....	18,164	15,282	33,446	Cumming.....	267	4.59	.45	Kingston; Cherokee Railroad.
Gilmer.....	6,527	117	6,644	Carnesville.....	266	3.91	.63	Elberton Air-line.]
Glascok.....	1,917	819	2,736	Atlanta.....	21,789	14.29	.14	Georgia Railroad; State Road; Macon
Glynn.....	1,926	3,450	5,376	Ellijay.....	1	1.47	.19	and Western; Atlanta and West Point;
Greene.....	4,298	8,156	12,454	Gibson.....	2,348	3.10	.15	Atlanta and Richmond Air-line.
Gordon.....	7,726	1,536	9,268	Brunswick.....	913	3.42	.61	Albany and Brunswick; Macon and
				Greensborough.....	427	4.45	.30	Brunswick.
				Calhoun.....	1	6.33	.50	Georgia Railroad; also Athens branch.
								State, or Western and Atlantic; also
								Selma, Rome, and Dalton.

* Cut off from Telfair, Pulaski, and Montgomery since 1890.
† According to census taken in 1877, 35,950.

‡ Cut off from Campbell and Carroll since 1890.
§ Population not given separately.

Table showing the Population of each County, etc.—(Continued.)

COUNTIES.	POPULATION OF EACH COUNTY.			County Sites.	Population of County Sites.	Average value of		RAILROAD TRAVERSING EACH COUNTY.
	White.	Colored.	Aggregate.			Improved lands.	Wild lands.	
Gwinnett.....	10,272	2,159	12,431	Lawrenceville.....	*	\$4.46	\$0.59	Atlanta and Richmond Air-line.
Habersham.....	5,373	940	6,322	Clarksville.....	293	1.90	.30	Atlanta and Richmond Air-line; also Elberton Air-line.
Hall.....	8,317	1,390	9,607	Gainesville.....	472	3.56	.43	Atlanta and Richmond Air-line; also Northeastern.
Hancock.....	3,645	7,672	11,317	Sparta.....	*	4.74	.46	Macon and Augusta.
Haralson.....	3,685	310	4,004	Buchanan.....	*	2.92	.30	North and South Georgia Railroad.
Harris.....	5,791	7,403	13,284	Hamilton.....	359	4.32	.39	Elberton Air-line.
Hart.....	4,841	1,944	6,785	Franklin.....	354	3.77	.30	Atlanta and Richmond Air-line.
Heard.....	5,218	2,648	7,866	McDonough.....	320	3.66	.72	North and South Georgia Railroad.
Henry.....	6,269	2,813	10,102	Perry.....	856	5.40	.69	Elberton Air-line.
Houston.....	5,071	13,132	20,406	Irwinsville.....	390	4.46	.36	Macon and Western.
Irwin.....	1,541	296	1,837	Jefferson.....	90	4.90	.32	Southwestern.
Jackson.....	7,471	3,710	11,181	Monticello.....	*	4.83	.33	Albany and Brunswick.
Jasper.....	3,884	6,555	10,439	Louisville.....	*	2.89	.35	Northwestern.
Jefferson.....	4,247	7,943	12,190	Wrightsville.....	356	3.07	.32	Central Railroad.
Johnson.....	2,049	915	2,964	Clinton.....	362	1.57	.52	Central Railroad; also Macon and Augusta.
Jones.....	2,991	6,445	9,436	Dublin.....	*	3.56	.33	Southwestern Railroad.
Laurens.....	4,180	3,654	7,834	Starkville.....	*	1.35	.36	Atlantic and Gulf.
Lee.....	1,924	7,643	9,567	Hinesville.....	*	2.89	.47	
Liberty.....	2,428	5,260	7,688	Lincolnton.....	92	2.85	.50	
Lincoln.....	1,797	3,616	5,413				.36	

* Population not given separately.

POPULATION OF COUNTIES, ETC.

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Lowndes.....	4,276	4,045	8,321	Valdosta.....	1,199	1.77	.13	Atlantic and Gulf.
Lumpkin.....	4,699	4,028	5,161	Dahlonega.....	471	2.71	.29	Southwestern.
Macon.....	3,975	7,843	11,458	Oglethorpe.....	1,700	2.57	.36	
Madison.....	3,046	2,881	3,227	Douglasville.....	525	3.27	.58	
Macon County.....	4,169	3,830	7,999	Brunswick.....	369	2.35	.23	Georgia Railroad.
McDuffie.....	1,196	3,288	4,491	Thomas.....	147	3.04	.26	Atlantic and Gulf.
McIntosh.....	6,387	7,369	13,756	Darien.....	1	3.12	.39	
Miller.....	2,135	986	3,021	Cecilville.....	1	3.12	.44	
Milton.....	3,818	466	3,021	Calhoun.....	1	3.12	.44	
Mitchell.....	3,683	2,950	4,654	Alpharetta.....	1	3.12	.44	
Monroe.....	6,498	10,864	17,223	Camilla.....	1	3.12	.44	
Montgomery.....	2,478	1,183	3,283	Conley.....	1	3.12	.44	
Morgan.....	3,637	7,058	12,596	Mont Vernon.....	1	3.12	.44	South Georgia and Florida.
Murray.....	5,743	757	6,500	Madison.....	1,389	4.35	.53	South Georgia and Florida.
Muscogee.....	7,441	9,220	16,663	Spring Place.....	248	4.07	.36	Atlantic and Gulf.
Newton.....	8,601	6,014	14,615	Columbia.....	7,401	6.40	.52	Georgia Railroad.
Oconee.....	4,621	7,141	11,782	Covington.....	1,121	5.42	.36	Southwestern; also North and South
Oglethorpe.....	7,588	556	7,141	Watkinsville.....	443	4.42	.29	Georgia Railroad.
Panola.....	5,188	819	7,659	Lexington.....	1	3.38	.27	Athens branch of Georgia Railroad.
Pickens.....	1,964	814	5,317	Dallas.....	1	3.53	.32	
Pike.....	5,999	4,966	10,995	Jasper.....	1	2.60	.24	Atlantic and Gulf
Polk.....	5,244	2,598	7,822	Blackshear.....	490	5.42	.44	Macon and Western; also Upson County
Pulaski.....	5,955	5,985	11,940	Zebulon.....	1	5.42	.44	Railroad.
Putnam.....	3,016	7,445	10,461	Cedartown.....	323	6.73	.45	Cherokee Railroad.
Quitman.....	4,773	2,177	4,130	Hawkinsville.....	813	1.51	.44	Macon and Brunswick; also Hawkins-
Rabun.....	3,877	1,179	4,130	Easton.....	1,240	4.22	.36	ville branch.
Randolph.....	5,477	5,477	10,954	Georgetown.....	263	2.73	.18	Millersville and Easton.
Richmond.....	13,157	25,722	45,389	Clayton.....	70	2.84	.36	Branch of the Southwestern.
				Cuthbert.....	2,210	8.92	.35	Branch of the Southwestern.
				Augusta.....	15,389	8.92	.35	Georgia, Central, Port Royal, South
								Carolina, Charlotte, Columbia, and
								Augusta, and Augusta and Knoxville,
								now being built.

* Cut off from Columbia since 1870.
† According to census taken in 1877, 23,768.
‡ Cut off from Clarke since 1870.
§ Population not given separately.

¶ Now being extended to Rabun.

Table showing the Population of each County, etc.—(Continued.)

COUNTIES.	POPULATION OF EACH COUNTY.			County Sites.	Population of County Sites.	Average value of improved lands.	Average value of wild lands.	RAILROAD TRAVERSING EACH COUNTY.
	White.	Colored.	Aggregate.					
Rockdale*.....	2,278	.....	.....	Conyers.....	637	\$7.25	\$6.57	Georgia Railroad.
Schley.....	4,287	2,851	5,129	Ellaville.....	157	3.34	.32	Central Railroad.
Scriven.....	5,327	4,888	9,175	Sylvania.....	†	1.07	.33	Macon and Western.
Spalding.....	5,104	4,878	10,205	Griffin.....	3,421	5.77	.14	Southwestern.
Stewart.....	5,920	9,100	14,204	Lumpkin.....	778	3.68	.47	Georgia Railroad; also Washington branch.
Sumter.....	5,920	10,630	16,550	Americus.....	3,259	3.77	.39	Southwestern.
Talbot.....	3,761	7,152	11,913	Talbotton.....	†	3.34	.24	Georgia Railroad; also Washington branch.
Taliaferro.....	1,809	2,987	4,796	Crawfordville.....	55	3.10	.33	Southwestern.
Tatnall.....	3,580	1,280	4,860	Reidsville.....	†	.72	.35	Macon and Brunswick.
Taylor.....	4,181	2,062	7,143	Builer.....	†	2.13	.27	Southwestern.
Telfair.....	2,100	1,145	3,245	McRae.....	†	1.01	.32	Atlantic and Gulf; also South Georgia and Florida.
Terrell.....	3,769	5,284	9,053	Dawson.....	1,099	2.61	.33	Atlanta and West Point; also North and South Georgia.
Thomas.....	6,160	8,363	14,523	Thomasville.....	1,651	2.49	.17	Macon and Brunswick.
Towns.....	2,623	155	2,780	Hiawasee.....	†	1.95	.25	Upson County Railroad.
Troup.....	6,408	11,224	17,632	La Grange.....	2,053	4.52	.29	
Twiggs.....	2,913	5,632	8,545	Marion.....	265	2.11	.16	
Union.....	5,153	114	5,267	Blairsville.....	†	1.56	.51	
Upson.....	4,865	4,565	9,430	Thomaston.....	630	3.80		

* Cut off from Newton since 1870.
† Population not given separately.

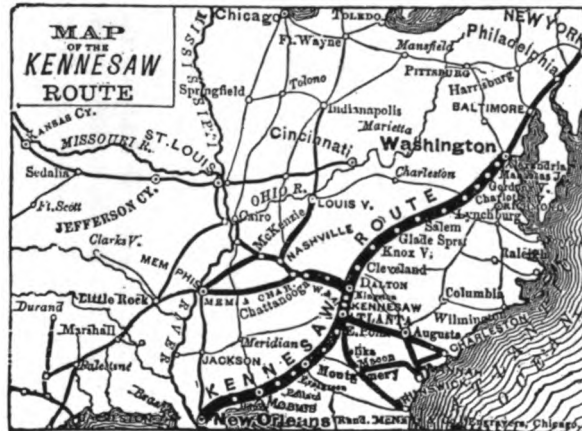
† There is also in this county the town of West Point, with a population of 1,405 in 1870.

Walker.....	8,396	1,529	9,925	Lafayette.....	251	5.17	.46	Selma, Rome, and Dalton.
Walton.....	6,876	4,165	11,041	Monroe.....	438	4.99	.22	Georgia Railroad
Ware.....	1,831	452	2,283	Warren.....	630	3.71	.09	Atlantic and Gulf
Warren.....	4,381	6,260	10,641	Warrenton.....	*	3.70	.41	Georgia R.R.; also Macon and Augusta.
Washington.....	7,538	8,312	15,850	Sandersville.....	*	4.47	.33	Central Railroad
Wayne.....	1,798	379	2,177	Waynesville.....	*	3.03	.31	Atlantic and Gulf, Macon and Bruns-
Webster.....	2,439	2,228	4,667	Preston.....	186	3.03	.53	wick, Albany and Brunswick.
White.....	4,022	564	4,586	Cleveland.....	145	2.31	.37	Western and Atlantic or State; Selma,
Whitfield.....	8,666	1,511	10,177	Dalton.....	1,809	5.86	.57	Rome, and Dalton; East Tennessee
Wilcox.....	1,002	537	2,439	Abbeville.....	*	.95	.35	and Georgia.
Wilkes.....	3,969	7,827	11,796	Washington.....	1,506	4.24	.34	Washington branch of Georgia Rail-
Wilkinson.....	4,684	4,699	9,383	Irwin.....	241	2.40	.33	road.
Worth.....	2,673	1,105	3,778	Isabella.....	54	1.36	.31	Central Railroad.
								Albany and Brunswick.
	638,956	545,142	1,184,109					

* Population not given separately.

There are in Georgia about 2400 miles of railroad, of which the most extensive roads are the Georgia Railroad and branches, embracing 228 miles; the Central Railroad and branches, with 388 miles; the Southwestern and branches, including 306 miles; and the Atlantic and Gulf, with its branches, 345 miles.

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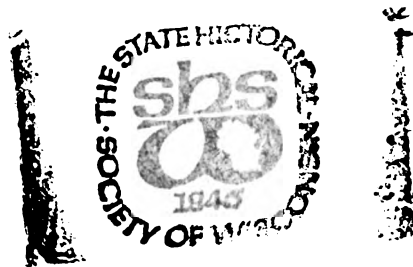
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